SPECIFICATIONS AND BILL OF QUANTITIES WITH ENGINEERING ESTIMATE

PROJECT:

SOUTH OMO HEALTH POST REHABILITATION WORK

LOCATION:

SOUTH OMO, ETHIOPIA

OWNER:

DOCTORS WITH AFRICA- CUAMM



Prepared by:- Solomon Tesfay giu-24

SOUTH OMO HEALTH POST GRAND SUMMARY

ERYA KEYESSA	Birr	-
ERYA AMBULE	Birr	-
BESHEDA	Birr	-
SEMBELE	Birr	-
WERO	Birr	-
	Birr	-
15% VAT	Birr	-
GRAND TOTAL	Birr	-

ERYA KEYESSA HEALTH POST SUMMARY OF PRICES

01. EXCAVATION AND EARTH WORK	Birr	-
02. CONCRETE WORK	Birr	-
03. MASONRY WORKS	Birr	-
04. ROOFING	Birr	-
05 . CARPENTRY AND JOINERY	Birr	-
06 . METAL WORKS	Birr	-
09 . PAINTING	Birr	-
11 . ELECTRICAL WORK	Birr	-
	Dime	
	BILL	-
1E9/ VAT	Birr	
15% VAI	DIT	-
GRAND TOTAL	Birr	-

BILL OF QUANTITY - Erya Keyessa

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE	TOTAL
01	EXCAVATION AND EARTH WORK				
	EXCAVATION WORKS * The contractor is responsible for covering any costs incurred due to damage of utility lines and care shall be taken for all existing utilities that could be covered or exposed to view throughout the project execution period.				
1.1	EXCAVATION				
1.1.1	REMOVAL OF TOP SOIL Removal of Top Soil: The top soil shall be removed to the specified depth (200-300mm as directed by the Engineer) leaving area clear off any vegetable soil. The removal of top soil shall be measured by the area occupied by the work to be placed on the cleared area. Removal of top soil shall be understood as including the disposal of surplus material or stock piling and wheel spreading of top soil at later stages as directed by the Engineer. (RAMP) EXCAVATION IN ORDINARY SOIL	m²	3,60		-
	 * Excavation shall mean the excavation and get out of the soil. Excavation in ordinary soil shall be measured by volume as the net void created by the excavation with deduction made for existing voids. * "Ordinary Soil" shall mean material yielding to ordinary excavation machinery or pick axes. * "Boulder" shall mean isolated volume of hard rock in ordinary soil and soft rock or above ground less than 1/2 cubic meter in volume. 				
1.1.2.1	Bulk Excavation in Ordinary Soil: Bulk excavation to reduce the Natural ground Level to a depth not exceeding 100cm from reduced level.	m³	1,44		-
1.2	 BACK FILL * Fill to excavations or to make up level shall be made in suitable material approved by the Engineer and capable of being compacted. b Fill shall be placed in successive stages of not exceeding 200mm and watered and compacted to approval by the Engineer. * The compaction achieved in filling shall be measured in accordance with the standard practice. The In situ moisture content and density shall be compared with laboratory test results of modified AASHO T147 performed on samples of the selected material. * The minimum relative compaction to be achieved in the compacted area shall be 95% maximum dry density and the moisture content shall be within the range of 95% dry density. The moisture content of the fill material shall be adjusted as necessary to achieve the required compaction. Any material which after repeated compaction, does not fulfill the requirements, shall be removed and replaced. * The final levels of fill shall be adjusted, graded and prepared to receive bedding to be laid on fill. Fill shall be measured as equal to the net volume of void to be filled and shall be understood as including the stockpiling and haulage of material from location of fill. 				
1.2.1	Selected borrowed fill - Suitable non-expansive well graded soil or granular material with no rock lumps imported from outside and approved by the Engineer. Fill works Is under floor slab and around footing pad as well a around foundation column.	m³	0,42		-
1.3	DISPOSAL * All unsuitable and surplus suitable material arising from excavations shall be disposed off when instructed by the Engineer. * Disposal shall be made to tips directed by the Engineer or indicated in the document. In the absence of direction from the Engineer or indication in the documents, it is the contractor's responsibility to identify the appropriate tip and dispose the material. * Disposal shall be understood to include stock piling, loading, transporting, dumping and wheel spreading at tip. Disposal shall be measured as the net volume arising from the void created by the excavation, less excavated material backfill, filled and wheel spread within site or left stockpiled.				
1.3.1	Cartaway surplus excavated material to a place where the administration has allotted for disposal. The contractor is responsible for permission from relevant authorities.	m³	2,16		-
1.4	SUNDRY ITEMS				
1.4.1	HARDCORE AND STONE FILLERS Hardcore shall be sound approved stone of specified finishing thickness and placed as directed by the Engineer and finished blinded with 20mm crushed aggregate.				
1.4.1.1	Hardcore under Ground floor slab to a thickness of 25cm and blinded with 20mm crushed aggregate.	m²	0,42		-
01	SUB TOTAL EXCAVATION & EARTH WORK ETH BIRR				-

02					
02	CONCRETE WORKS				
2.1	Cast in Place Concrete				
	Cast in place concrete is concrete premixed at a batching plant and transported to the work				
	site or concrete whose ingredients are transported to the site and mixed just before casting				
211	For thick C-5 lean concrete with minimum compart content of $150k\pi/m^2$ of concrete				
2.1.1	under				
2111	Linder Stone Masonry	m ²	1 50		
2112	Under Ramp Slab	m ²	2 10		
2.1.1.2		m	2,10		
2.1.2.1	REINFORCED CONCRETE GRADE C-25 (25 MPa) cast into formworks and vibrated around				
	rod reinforcement bars.				
	NB: Form work and reinforcement steel will measured elsewhere.				
1211	In RAMP slab	m ²	3.60		
2.1.2.2	REINFORCEMENT BARS		3,00		
	Reinforcement work shall be understood as the supply and fixing of reinforcement bars,				
	including ties and chairs.				
	The steel bars shall be high tensile (Grade S-420) hot rolled deformed Reinforcement Steel				
	bar				
2.1.2.2.1	Rebar Diameter 8mm	kg	14,00		
02	SUB TOTAL CONCRETE WORK ETH BIRR	-			-
03					+
5.1	Stone obtained from quarries approved by the Engineer shall be hard & sound from from				
	vents, cracks, fissures, discoloration, or other defects that will adversely affect strength or				
	appearance. Stone chips out of which shaped stone are to be produced shall not be less than				
	450mm average and 380mm individual length.				
311	Stone masonry Concealed from View: 50cm thick stone masonry bedded in cement mortar				
5.1.1	(1:3) mix. price shall include cement mortar. (RAMP)	m³	1,20		
03	SUB TOTAL MASONRY WORK ETH BIRR				-
04	ROOF WORK				
	Supply and fix transparent roof cover fixed to the purlin. Price shall include water proof				
41		m²	5.00		
4,1	washers.	m²	5,00		
4,1	washers.	m²	5,00		
4,1 04	washers. SUB TOTAL ROOF WORK ETH BIRR	m²	5,00		-
4,1 04	washers. SUB TOTAL ROOF WORK ETH BIRR CARPENTRY AND JOINERY WORK	m²	5,00		-
4,1 04 05	washers. SUB TOTAL ROOF WORK ETH BIRR CARPENTRY AND JOINERY WORK Supply and fix 8 mm thick chin wood ceilings as per the Engineer's approval. Price shall	m²	5,00		
4,1 04 05	washers. SUB TOTAL ROOF WORK ETH BIRR CARPENTRY AND JOINERY WORK Supply and fix 8 mm thick chip wood ceilings as per the Engineer's approval. Price shall include (40x50)mm wooden battens with c/c spacing of 600 mm both ways middle and	m ²	5,00		
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09	SUB TOTAL PAINTING WORK ETH BIRR			-
11	ELECTRICAL INSTALLATION			
	Supply, Install and Test all Electrical Systems: Power Distribution Boards with Circuit Breakers, Light Fittings with Lamps, Switches, Outlets and Others including required items and accessories. All items shall be Industry standard and approved equivalent types.			
11,2	Feeder Power Cables			
	CABLES			
11.2.1	3x4mm sq.	Im	50	-
	PVC PIPES			
11.2.2	PVC conduit of 16 mm diameter	lm	50	-
11,3	Extra Over Light Points for Switches			
11.3.1	Flush mounted Single switch points fed through PVC insulated conductors of 2x2.5mm ² inside PVC conduits of 16mm diameter, including junction boxes	No	4	-
11,4	Light Points			
11.4.1	Flush mounted light points fed through PVC insulated conductors of 3x2.5mm ² inside PVC conduits of 16mm diameter, including junction boxes with covers and insulating screw cap connectors.	No	4	-
11,5	Extra Over Light Points for Flush Mounted Switches			
11.5.1	Flush mounting single switch	No	4	-
11,6	Flush Mounted Socket Outlet Points			
11.6.1	16A/1P socket outlet points fed through PVC insulated conductors of 3x2.5mm ² inside PVC conduit of 16mm diameter including junction boxes with covers and insulating screw cap connectors.	No	4	-
11,7	Flush Mounted Socket Outlets with Earth Contact			
11.7.1	Flush mounting socket outlet of 16A 1Phase.	No	4	-
11,8	Light Fittings			
	Supply, Connect and Test lamps and complete accessories.			
11.8.1	LED Ceiling lamp, 18W, dia 330mm Waterproof	No	4	-
11	SUB TOTAL FOR ELECTRICAL WORK ETH BIRR			-

ERYA AMBULE HEALTH POST SUMMARY OF PRICES

01. EXCAVATION AND EARTH WORK	Birr	-
02. CONCRETE WORK	Birr	-
03. MASONRY WORKS	Birr	-
04. ROOFING	Birr	_
05 . CARPENTRY AND JOINERY	Birr	_
06 . MFTAL WORKS	Birr	_
	Diri	
09 . PAINTING	Birr	-
10. SANITARY WORK	Birr	-
11 . ELECTRICAL WORK	Birr	_
	Birr	-
15% VAT	Birr	-
GRAND TOTAL	Birr	-

BILL OF QUANTITY - Erya Ambule

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE	TOTAL
01	EXCAVATION AND EARTH WORK				
	EXCAVATION WORKS				
	* The contractor is responsible for covering any costs incurred due to damage of				
	exposed to view throughout the project execution period.				
1.1					
	Removal of Top Soil: The top soil shall be removed to the specified depth (200-				
	300mm as directed by the Engineer) leaving area clear off any vegetable soil. The				
	removal of top soil shall be measured by the area occupied by the work to be				
	placed on the cleared area. Removal of top soil shall be understood as including the	m²	3,60		-
	disposal of surplus material of stock plling and wheel spreading of top soil at later stages as directed by the Engineer (RAMP)				
	stages as an even by the Englicer. (Newn)				
1.1.2	EXCAVATION IN ORDINARY SOIL				
	* Excavation shall mean the excavation and get out of the soil. Excavation in				
	ordinary soil shall be measured by volume as the net void created by the excavation				
	with deduction made for existing volds. * "Ordinary Soil" shall mean material yielding to ordinary excavation machinery or				
	pick axes.				
	* "Boulder" shall mean isolated volume of hard rock in ordinary soil and soft rock				
	or above ground less than 1/2 cubic meter in volume.				
1.1.2.1	Bulk Excavation in Ordinary Soil: Bulk excavation to reduce the Natural ground Level	m ³	1 //		
	to a depth not exceeding 100cm from reduced level.	111	1,44		-
1.2					
	* Fill to excavations or to make up level shall be made in suitable material approved by the Engineer and canable of being compacted				
	P Fill shall be placed in successive stages of not exceeding 200mm and watered and				
	compacted to approval by the Engineer.				
	* The compaction achieved in filling shall be measured in accordance with the				
	standard practice. The In situ moisture content and density shall be compared with				
	laboratory test results of modified AASHO 1147 performed on samples of the				
	* The minimum relative compaction to be achieved in the compacted area shall be				
	95% maximum dry density and the moisture content shall be within the range of				
	95% dry density. The moisture content of the fill material shall be adjusted as				
	necessary to achieve the required compaction. Any material which after repeated				
	compaction, does not fulfill the requirements, shall be removed and replaced.				
	be laid on fill. Fill shall be measured as equal to the net volume of void to be filled				
	and shall be understood as including the stockpiling and haulage of material from				
	location of fill.				
1 2 1	Selected horrowed fill - Suitable non-expansive well graded soil or granular				
1.2.1	material with no rock lumps imported from outside and approved by the Engineer				
	Fill works Is under floor slab and around footing pad as well a around foundation	m³	0,42		-
	column.				
1.3	DISPOSAL				
	* All unsuitable and surplus suitable material arising from excavations shall be				
	uisposed on when instructed by the Engineer. * Disposal shall be made to tips directed by the Engineer or indicated in the				
	document. In the absence of direction from the Engineer or indication in the				
	documents, it is the contractor's responsibility to identify the appropriate tip and				
	dispose the material.				
	* Disposal shall be understood to include stock piling, loading, transporting,				
	aumping and wheel spreading at tip. Disposal shall be measured as the net volume				
	filled and wheel spread within site or left stockpiled.				
1 2 1	Cartaway surplus excavated material to a place where the administration has				
1.3.1	allotted for disposal. The contractor is responsible for permission from relevant	m ³	2.10		
	authorities.	111	2,10		-
1.4	SUNDRY ITEMS				
1.4.1	HARDCORE AND STONE FILLERS	-			

Erya Ambule

-	-			
06	SUB TOTAL METAL WORK ETH BIRR			-
6.2	Double leaf metal Cover for the INCINERATOR combustion chamber	No	1,00	-
	accessories to complete the work.			
	1.5 mm thick sheet metal, two coats of anti rust and three coats of synthetic enamel paint, approved guality cylindrical lock, hinges, manila and any other			
	mm thick ribbed sheet all as per the engineer's approval. Unit price shall include:			
	Metal windows and doors manufactured from 38X1.5mm LTZ frame profile and 0.8			
06	METAL WORK			
05	SUB TOTAL CARPENTRY AND JOINFRY WORK FTH BIRR			-
5,1	snail include (40x50)mm wooden battens with c/c spacing of 600 mm both ways, middle and corner list, and all other necessary accessories	m²	20,00	-
	Supply and fix 8 mm thick chip wood ceilings as per the Engineer's approval. Price			
05	CARPENTRY AND JOINERY WORK			
04	SUB TOTAL ROOF WORK ETH BIRR	1	1	-
4,1	proof washers.	m²	5,00	-
04	Supply and fix transparent roof cover fixed to the purlin. Price shall include water			
04				
03	SUB TOTAL MASONRY WORK ETH BIRR			-
	inortar (1.5) mix. price shan micioue cement mortar. (KAMP)		1,20	
3.1.1	Stone masonry Concealed from View: 50cm thick stone masonry bedded in cement	m³	1.20	-
	shall not be less than 450mm average and 380mm individual length.			
	strength or appearance. Stone chips out of which shaped stone are to be produced			
	from vents, cracks, fissures, discoloration, or other defects that will adversely affect			
	Stone obtained from quarries approved by the Engineer shall be hard & sound, free			1
3.1	STONE FOR MASONRY			
03				
02	SUB TOTAL CONCRETE WORK ETH BIRR			-
2.1.2.2.1	Rebar Diameter 8mm	kg	14,00	-
	Reinforcement Steel bar			
	The steel bars shall be high tensile (Grade S-420) hot rolled deformed			
	bars, including ties and chairs.			
2111212	Reinforcement work shall be understood as the supply and fixing of reinforcement	<u> </u>		
2.1.2.1.1		m*	3,60	-
21211	around rod reinforcement bars.	m ²	2.00	
2.1.2.1	REINFORCED CONCRETE GRADE C-25 (25 MPa) cast into formworks and vibrated			
2.1.2	REINFORCED CONCRETE			ļ
2.1.1.2	Under Ramp Slab	m²	2,10	-
2.1.1.1	Under Stone Masonry	m²	1,50	 -
	concrete under			
2.1.1	50mm thick C-5 lean concrete with minimum cement content of 150kg/m3 of	<u> </u>		
	just before casting in place.			
	the work site or concrete whose ingredients are transported to the site and mixed			
2.1	Cast in Place Concrete	<u> </u>		
02				
01	SUB TOTAL EXCAVATION & EARTH WORK ETH BIRR			-
	crushed aggregate.	m²	0,42	-
1.4.1.1	Hardcore under Ground floor slab to a thickness of 25cm and blinded with 20mm	-		
	as directed by the Engineer and finished blinded with 20mm crushed aggregate.			
	Hardcore shall be sound approved stone of specified finishing thickness and placed			

09	PAINTING			
9.1	Apply three coats of plastic emulsion paint. Price shall include pre - cleaning & preparation of the surface. Remove all chalky surface, loose paint, dirt and other contaminants by wire brushing or by using paint remover. The area should be cleared/cleaned before and after the construction work.			
911	To Internal walls	m ²	121 70	
912	To External walls	m ²	191,70	-
5.1.2			19,20	 -
09	SUB TOTAL PAINTING WORK FTH BIRR			-
10	SANITARY INSTALLATION WORKS			
10,1	Connect and Fix Faucet and some fittings so as to make the water Supply Line functional Price shall include all related piping work, valves and related civil works.	LS	1,00	-
10	SUB TOTAL FOR SANITARY WORK ETH BIRR			-
11	ELECTRICAL INSTALLATION			
	Supply, Install and Test all Electrical Systems: Power Distribution Boards with Circuit Breakers, Light Fittings with Lamps, Switches, Outlets and Others including required items and accessories. All items shall be Industry standard and approved equivalent types.			
11,2	Feeder Power Cables			
	CABLES			
11.2.1	3x4mm sq.	lm	50	-
	PVC PIPES			
11.2.2	PVC conduit of 16 mm diameter	lm	50	-
11.2				
11,3	Extra Over Light Points for Switches			
11.5.1	Flush mounted single switch points led through PVC insulated conductors of $2\nu^2$ inside DVC conduits of 10 mm diameter, including junction haves	No	4	-
11.4				
11,4				
11.4.1	Flush mounted light points fed through PVC insulated conductors of 3x2.5mm ⁻ inside PVC conduits of 16mm diameter, including junction boxes with covers and insulating screw cap connectors.	No	4	-
11,5	Extra Over Light Points for Flush Mounted Switches			
11.5.1	Flush mounting single switch	No	4	-
11,6	Flush Mounted Socket Outlet Points			
11.6.1	16A/1P socket outlet points fed through PVC insulated conductors of 3x2.5mm ² inside PVC conduit of 16mm diameter including junction boxes with covers and insulating screw cap connectors.	No	4	-
11,7	Flush Mounted Socket Outlets with Earth Contact			
11.7.1	Flush mounting socket outlet of 16A 1Phase.	No	4	 -
11,8	Light Fittings			
44.2.1	Supply, Connect and Test lamps and complete accessories.			
11.8.1		No	4	-
1 11	I SUB TUTAL FUK FLFUTKICAL WUKK FTH BIRK			-

BESHEDA HEALTH POST SUMMARY OF PRICES

01. EXCAVATION AND EARTH WORK	Birr	-
02. CONCRETE WORK	Birr	-
03. MASONRY WORKS	Birr	-
04. ROOFING	Birr	-
05 . CARPENTRY AND JOINERY	Birr	-
06 . METAL WORKS	Birr	-
09 . PAINTING	Birr	-
10. SANITARY WORK	Birr	-
11 . ELECTRICAL WORK	Birr	-
	Birr	-
15% VAT	Birr	-
GRAND TOTAL	Birr	-

BILL OF QUANTITY - Besheda

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE	TOTAL
01	EXCAVATION AND EARTH WORK				
	EXCAVATION WORKS				
	* The contractor is responsible for covering any costs incurred due to damage of utility lines and care shall be taken for all existing utilities that could be covered or exposed to				
	view throughout the project execution period.				
1.1	EXCAVATION				
1.1.1	REMOVAL OF TOP SOIL				
	as directed by the Engineer) leaving area clear off any vegetable soil. The removal of top				
	soil shall be measured by the area occupied by the work to be placed on the cleared				
	area. Removal of top soil shall be understood as including the disposal of surplus	m²	19,60		-
	material or stock piling and wheel spreading of top soil at later stages as directed by the				
	Engineer. (RAMP and WATER TANKER BASE)				
1.1.2	EXCAVATION IN ORDINARY SOIL				
	* Excavation shall mean the excavation and get out of the soil. Excavation in ordinary				
	soil shall be measured by volume as the net void created by the excavation with				
	deduction made for existing voids.				
	axes				
	* "Boulder" shall mean isolated volume of hard rock in ordinary soil and soft rock or				
	above ground less than 1/2 cubic meter in volume.				
1.1.2.1	Bulk Excavation in Ordinary Soil: Bulk excavation to reduce the Natural ground Level to a				
	depth not exceeding 100cm from reduced level. (RAMP)	m³	1,44		-
1.2	BACK FILL				
	the Engineer and capable of being compacted.				
	P Fill shall be placed in successive stages of not exceeding 200mm and watered and				
	compacted to approval by the Engineer.				
	* The compaction achieved in filling shall be measured in accordance with the standard				
	practice. The In situ moisture content and density shall be compared with laboratory				
	* The minimum relative compaction to be achieved in the compacted area shall be 95%				
	maximum dry density and the moisture content shall be within the range of 95% dry				
	density. The moisture content of the fill material shall be adjusted as necessary to				
	achieve the required compaction. Any material which after repeated compaction, does				
	not fulfill the requirements, shall be removed and replaced.				
	I he final levels of fill shall be measured as equal to the net volume of void to be filled and shall				
	be understood as including the stockpiling and haulage of material from location of fill.				
121	Celested howeved fill. Suitable non-expansive well graded cell or granular material				
1.2.1	with no rock lumps imported from outside and approved by the Engineer. Fill works is				
	under floor slab and around footing pad as well a around foundation column. (RAMP)	m³	0,42		-
1.3	DISPOSAL				
	* All unsuitable and surplus suitable material arising from excavations shall be disposed				
	off when instructed by the Engineer.				
	* Disposal shall be made to tips directed by the Engineer or indicated in the document.				
	contractor's responsibility to identify the appropriate tip and dispose the material.				
	* Disposal shall be understood to include stock piling, loading, transporting, dumping				
	and wheel spreading at tip. Disposal shall be measured as the net volume arising from				
	the void created by the excavation, less excavated material backfill, filled and wheel				
	spread within site or left stockpiled.				
1 2 1	Cartaway surplus avaluated material to a place where the administration has all atted				
1.3.1	for disposal. The contractor is responsible for permission from relevant authorities	m ³	FDC		
			5,30		-
1.4	SUNDRY ITEMS				
1.4.1	HARDCORE AND STONE FILLERS				
	Hardcore shall be sound approved stone of specified finishing thickness and placed as				
	directed by the Engineer and finished blinded with 20mm crushed aggregate.				

1.4.1.1	Hardcore under RAMP to a thickness of 25cm and blinded with 20mm crushed aggregate.	m²	0,42	-
01	SUB TOTAL EXCAVATION & EARTH WORK ETH BIRR			-
02	CONCRETE WORKS			
2.1	Cast in Place Concrete			
	Cast in place concrete is concrete premixed at a batching plant and transported to the			
	work site or concrete whose ingredients are transported to the site and mixed just			
	before casting in place.			
2.1.1	50mm thick C-5 lean concrete with minimum cement content of 150kg/m3 of			
	concrete under			
2.1.1.1	Under Stone Masonry	m ²	1.50	-
2.1.1.2	Under Ramp Slab	m ²	2,00	-
2.1.2	REINFORCED CONCRETE		2,20	
2.1.2.1	REINFORCED CONCRETE GRADE C-25 (25 MPa) cast into formworks and vibrated			
	around rod reinforcement bars.			
2.1.2.1.1	In RAMP slab	m²	3.60	-
2.1.2.2	REINFORCEMENT BARS		-,	
	Reinforcement work shall be understood as the supply and fixing of reinforcement bars.			
	including ties and chairs.			
	The steel bars shall be high tensile (Grade S-420) hot rolled deformed Reinforcement			
	Steel bar			
2.1.2.2.1	Rebar Diameter 8mm (RAMP)	kg	14.00	-
			,	
02	SUB TOTAL CONCRETE WORK ETH BIRR			-
03	MASONRY and BLOCKWORK			
3.1	STONE FOR MASONRY			
-	Stone obtained from quarries approved by the Engineer shall be hard & sound, free			
	from vents, cracks, fissures, discoloration, or other defects that will adversely affect			
	strength or appearance. Stone chips out of which shaped stone are to be produced shall			
	not be less than 450mm average and 380mm individual length.			
3.1.1	Stone masonry Concealed from View: 50cm thick stone masonry bedded in cement			
	mortar (1:3) mix. price shall include cement mortar. (RAMP)	m³	1,20	-
03	SUB TOTAL MASONRY WORK ETH BIRR	•		-
04	ROOF WORK			
	Supply and fix transparent roof cover fixed to the purlin. Price shall include water proof			
4,1	washers.	m²	3,00	-
04	SUB TOTAL BOOF WORK FTH BIRR			-
05	CARPENTRY AND JOINERY WORK			
05	Supply and fix 8 mm thick chin wood ceilings as per the Engineer's approval. Price shall			
	include (40x50)mm wooden battens with c/c spacing of 600 mm both ways, middle and			
5,1	corner list, and all other necessary accessories	m²	20,00	-
05		l		
05	SOB TOTAL CARPENTRY AND JOINERY WORK ETH BIRK			-
06				
00	WETAL WORK			
	thick ribbed sheet all as per the engineer's approval. Unit price shall include: 1.5 mm			
	thick sheet metal, two coats of anti rust and three coats of synthetic enamel paint			
	approved guality cylindrical lock, hinges, manila and any other accessories to complete			
	the work.			
6.2	Double leaf metal Cover for the INCINERATOR combustion chamber	No	1,00	-
06	SUB TOTAL METAL WORK ETH BIRR	-		-
09	PAINTING			
1		1		

9.1	Apply three coats of plastic emulsion paint. Price shall include pre - cleaning & preparation of the surface. Remove all chalky surface, loose paint, dirt and other			
	contaminants by wire brushing or by using paint remover. The area should be cleared/cleaned before and after the construction work.			
		2		
9.1.1	To Internal walls	m ⁻ 2	131,70	-
9.1.2	To External walls	m	19,20	-
09	SUB TOTAL PAINTING WORK ETH BIRR		1	-
10	SANITARY INSTALLATION WORKS			
10,1	Connect and Fix Faucet and some fittings so as to make the water Supply Line functional Price shall include all related piping work, valves and related civil works.	LS	1,00	-
10	SUB TOTAL FOR SANITARY WORK ETH BIRR			-
11	ELECTRICAL INSTALLATION			
	Supply, Install and Test all Electrical Systems: Power Distribution Boards with Circuit			
	Breakers, Light Fittings with Lamps, Switches, Outlets and Others including required			
	items and accessories. All items shall be Industry standard and approved equivalent			
	types.			
11,1	Switch Board			
11.1.1	1 pc main 25A, MCB, 3 Phase, 16 kA			
	3pc 16A, MCB, 1Phase, 6kA			
	4pc 10A, MCB, 1Phase, 6kA			
	2pc 16A, MCB, 1Phase, 6kA (spare)			
	25% reserve pitch	No	1	-
11,2	Feeder Power Cables			
	CABLES			
11.2.1	3x4mm sq.	lm	60	-
	PVC PIPES			
11.2.2	PVC conduit of 16 mm diameter	lm	60	-
11,3	Extra Over Light Points for Switches			
11.3.1	Flush mounted Single switch points fed through PVC insulated conductors of 2x2.5mm ²	No	4	-
	inside PVC conduits of 16mm diameter, including junction boxes			
11,4	Light Points			
11.4.1	Flush mounted light points fed through PVC insulated conductors of 3x2.5mm ² inside			
	PVC conduits of 16mm diameter, including junction boxes with covers and insulating	No	4	-
	sciew cap connectors.			
11,5	Extra Over Light Points for Flush Mounted Switches			
11.5.1	Flush mounting single switch	No	4	-
11,6	Flush Mounted Socket Outlet Points			
11.6.1	16A/1P socket outlet points fed through PVC insulated conductors of 3x2.5mm ² inside	No	4	-
11,7	Flush Mounted Socket Outlets with Earth Contact			
11.7.1	Flush mounting socket outlet of 16A 1Phase.	No	4	-
11,8	Light Fittings			
	Supply, Connect and Test lamps and complete accessories.			
11.8.1	LED Ceiling lamp, 18W, dia 330mm Waterproof	No	4	-
11	I SUB TOTAL FOR FLECTRICAL WORK FTH BIRR			-

SEMBELE HEALTH POST SUMMARY OF PRICES

	Dian	
01. EXCAVATION AND EARTH WORK	Birr	-
02. CONCRETE WORK	Birr	-
03. MASONRY WORKS	Birr	-
04. ROOFING	Birr	-
05 . CARPENTRY AND JOINERY	Birr	-
06 . METAL WORKS	Birr	-
09 . PAINTING	Birr	-
10. SANITARY WORK	Birr	-
11 . ELECTRICAL WORK	Birr	-
	Birr	-
15% VAT	Birr	-
GRAND TOTAL	Birr	-

BILL OF QUANTITY - Sembele

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE	TOTAL
01	EXCAVATION AND EARTH WORK				
	EXCAVATION WORKS * The contractor is responsible for covering any costs incurred due to damage of utility				
	lines and care shall be taken for all existing utilities that could be covered or exposed				
	to view throughout the project execution period.				
1.1	EXCAVATION				
1.1.1	REMOVAL OF TOP SOIL				
	as directed by the Engineer) leaving area clear off any vegetable soil. The removal of				
	top soil shall be measured by the area occupied by the work to be placed on the				
	cleared area. Removal of top soil shall be understood as including the disposal of	m²	19,60		-
	surplus material or stock pliing and wheel spreading of top soil at later stages as				
1.1.2	EXCAVATION IN ORDINARY SOIL				
	* Excavation shall mean the excavation and get out of the soil. Excavation in ordinary soil shall be measured by volume as the net void created by the excavation with				
	deduction made for existing voids.				
	* "Ordinary Soil" shall mean material yielding to ordinary excavation machinery or pick				
	axes. * "Boulder" shall mean isolated volume of hard rock in ordinary soil and soft rock or				
	above ground less than 1/2 cubic meter in volume.				
1.1.2.1	Bulk Excavation in Ordinary Soil: Bulk excavation to reduce the Natural ground Level to			ļ	<u> </u>
	a depth not exceeding 100cm from reduced level. (RAMP and WATER TANKER BASE)	m³	12,64		-
1.2	BACK FILL				
	the Engineer and capable of being compacted.				
	P Fill shall be placed in successive stages of not exceeding 200mm and watered and				
	compacted to approval by the Engineer.				
	* The compaction achieved in filling shall be measured in accordance with the standard practice. The In situ moisture content and density shall be compared with				
	laboratory test results of modified AASHO T147 performed on samples of the selected				
	material.				
	* The minimum relative compaction to be achieved in the compacted area shall be				
	dry density. The moisture content of the fill material shall be adjusted as necessary to				
	achieve the required compaction. Any material which after repeated compaction, does				
	not fulfill the requirements, shall be removed and replaced.				
	laid on fill. Fill shall be measured as equal to the net volume of void to be filled and				
	shall be understood as including the stockpiling and haulage of material from location				
	of fill.				
1.2.1	Selected borrowed fill - Suitable non-expansive well graded soil or granular material				
	with no rock lumps imported from outside and approved by the Engineer. Fill works Is	_			
	under floor slab and around footing pad as well a around foundation column. (RAMP	m³	3,07		-
	and WATER TANKER BASE)				
1.3	DISPOSAL * All unquitable and surplus suitable material arising from averyations shell be				
	disposed off when instructed by the Engineer.				
	* Disposal shall be made to tips directed by the Engineer or indicated in the document.				
	In the absence of direction from the Engineer or indication in the documents, it is the				
	contractor's responsibility to identify the appropriate tip and dispose the material.				
	and wheel spreading at tip. Disposal shall be measured as the net volume arising from				
	the void created by the excavation, less excavated material backfill, filled and wheel				
	spread within site or left stockpiled.				
1.3.1	Cartaway surplus excavated material to a place where the administration has allotted	m³	16,56		-
1.4					
1.4	HARDCORE AND STONE FILLERS				
	Hardcore shall be sound approved stone of specified finishing thickness and placed as				
	directed by the Engineer and finished blinded with 20mm crushed aggregate.				
1 4 4 4	Hardcore under PAMD to a thickness of 25 meand blinds duith 20 means and a				
1.4.1.1	aggregate.	m²	0,42		-

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1.4.1.1	Hardcore under WATER TANKER BASE to a thickness of 25cm and blinded with 20mm crushed aggregate.	m²	8,75	-
01	SUB TOTAL EXCAVATION & EARTH WORK ETH BIRR			-
02	CONCRETE WORKS			
2.1	Cast in Place Concrete			
	Cast in place concrete is concrete premixed at a batching plant and transported to the			
	before casting in place			
211	50mm thick C-5 lean concrete with minimum coment content of 150kg/m3 of			
2.1.1	concrete under			
2111	Linder Stone Masonry	m ²	1 50	
2.1.1.1	Under Bamp Slab	m ²	2 10	
2.1.2			2,10	
2.1.2.1	REINFORCED CONCRETE GRADE C-25 (25 MPa) cast into formworks and vibrated			
	around rod reinforcement bars.			
2.1.2.1.1	In RAMP slab	m²	3,60	-
2.1.2.2	REINFORCEMENT BARS			
	Reinforcement work shall be understood as the supply and fixing of reinforcement			
	bars, including ties and chairs.			
	The steel bars shall be high tensile (Grade S-420) hot rolled deformed Reinforcement			
	Steel bar			
2.1.2.2.1	Rebar Diameter 8mm (RAMP)	kg	14,00	
2.1.2.2.1	Rebar Diameter 10mm (WATER TANKER BASE)	kg	20,00	 -
02	SUB TOTAL CONCRETE WORK ETH BIRR		1	-
03				
3.1	STORE FOR MASONRY			
	from vents, cracks, fissures, discoloration, or other defects that will adversely affect			
	strength or appearance. Stone chips out of which shaped stone are to be produced			
	shall not be less than 450mm average and 380mm individual length.			
3.1.1	Stone masonry Concealed from View: 50cm thick stone masonry bedded in cement			
	mortar (1:3) mix. price shall include cement mortar. (RAMP)	m³	1,20	-
3.1.2	Stone masonry Concealed from View: 80cm thick stone masonry bedded in cement			
	mortar (1:3) mix. price shall include cement mortar. (WATER TANKER BASE)	m³	13,25	-
03	SUB TOTAL MASONRY WORK ETH BIRR		•	-
04	ROOF WORK			
	Supply and fix transparent roof cover fixed to the purlin. Price shall include water		2.00	
4,1	proof washers.	m-	3,00	-
04	SUB TOTAL ROOF WORK ETH BIRR			-
05	CARPENTRY AND JOINERY WORK			ļ
	Supply and fix 8 mm thick chip wood ceilings as per the Engineer's approval. Price shall			
5,1	include (40x50)mm wooden battens with c/c spacing of 600 mm both ways, middle	m²	50,00	-
,	and corner list, and all other necessary accessories		,	
05				
				-
06	METAL WORK			
	Metal windows and doors manufactured from 38X1.5mm LTZ frame profile and 0.8			
	mm thick ribbed sheet all as per the engineer's approval. Unit price shall include: 1.5			
	mm thick sheet metal , two coats of anti rust and three coats of synthetic enamel			
	paint, approved quality cylindrical lock, hinges, manila and any other accessories to			
	complete the work.			
6.2	Double leaf metal Cover for the INCINERATOR computing chamber	Nc	1.00	
0.2		INU	1,00	-
06	SUB TOTAL METAL WORK FTH BIRB	I	1	-
		t		
09	PAINTING			
		1		

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-				
9.1	Apply three coats of plastic emulsion paint. Price shall include pre - cleaning & preparation of the surface. Remove all chalky surface, loose paint, dirt and other contaminants by wire brushing or by using paint remover. The area should be			
	cleared/cleaned before and after the construction work.			
9.1.1	To Internal walls	m ²	131.70	-
9.1.2	To External walls	m ²	19.20	-
09	SUB TOTAL PAINTING WORK ETH BIRR			-
10	SANITARY INSTALLATION WORKS			
10,1	Providing, laying and jointing of uPVC PN-6 storm water down pipes with all uPVC pipe fittings including jointing with solvent cement joints and testing of joints etc. according to where shown on testing of joints etc. according to where shown on the drawings. Complete with all the necessary fittings. Dia. 110 mm, Outer diameter	ml	15	-
10,1	Connect the Existing Water Tanker with the Roof Gutter so as to make the roof water harvesting functional.	LS	1	-
10	SUB TOTAL FOR SANITARY WORK ETH BIRR			-
11	ELECTRICAL INSTALLATION			
	Supply, Install and Test all Electrical Systems: Power Distribution Boards with Circuit			
	Breakers, Light Fittings with Lamps, Switches, Outlets and Others including required			
	items and accessories. All items shall be industry standard and approved equivalent			
	types.			
11,1	Switch Board			
11,2	Feeder Power Cables			
	CABLES			
11.2.1	3x4mm sq.	lm	50	-
	PVC PIPES			
11.2.2	PVC conduit of 16 mm diameter	lm	50	 -
11.2.2			50	
11 3	Extra Over Light Points for Switches			
11.3.1	Elush mounted Single switch points fed through BVC insulated conductors of 2x2 5mm ²			
	inside PVC conduits of 16mm diameter, including junction boxes	No	4	-
11,4	Light Points			
11.4.1	Flush mounted light points fed through PVC insulated conductors of 3x2.5mm ² inside			
	PVC conduits of 16mm diameter, including junction boxes with covers and insulating	No	4	-
	screw cap connectors.			
11,5	Extra Over Light Points for Flush Mounted Switches			
11.5.1	Flush mounting single switch	No	4	-
11,6	Flush Mounted Socket Outlet Points			
11.6.1	16A/1P socket outlet points fed through PVC insulated conductors of 3x2.5mm ² inside			
	PVC conduit of 16mm diameter including junction boxes with covers and insulating screw cap connectors.	No	7	-
11,7	Flush Mounted Socket Outlets with Earth Contact	1		
11.7.1	Flush mounting socket outlet of 16A 1Phase.	No	7	 -
11,8	Light Fittings			
	Supply, Connect and Test lamps and complete accessories.			
11.8.1	LED Ceiling lamp, 18W, dia 330mm Waterproof	No	4	-
11	SUB TOTAL FOR ELECTRICAL WORK ETH BIRR			-

WERO HEALTH POST SUMMARY OF PRICES

01. EXCAVATION AND EARTH WORK	Birr	-
02. CONCRETE WORK	Birr	-
03. MASONRY WORKS	Birr	-
	D	
U4. ROOFING	Birr	-
05 . CARPENTRY AND IOINERY	Birr	-
	5	
09 . PAINTING	Birr	-
10. SANITARY WORK	Birr	-
	1	
	Birr	-
15% VAT	Birr	-
GRAND TOTAL	Birr	-

BILL OF QUANTITY - Wero

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE	TOTAL
01	EXCAVATION AND EARTH WORK				
	EXCAVATION WORKS				
	* The contractor is responsible for covering any costs incurred due to damage of utility lines and care shall be taken for all existing utilities that could be covered or exposed to				
	view throughout the project execution period.				
1.1	EXCAVATION REMOVAL OF TOP SOIL				
	Removal of Top Soil: The top soil shall be removed to the specified depth (200-300mm				
	as directed by the Engineer) leaving area clear off any vegetable soil. The removal of top				
	soil shall be measured by the area occupied by the work to be placed on the cleared				
	area. Removal of top soil shall be understood as including the disposal of surplus material or stock niling and wheel spreading of top soil at later stages as directed by the	m-	3,60		-
	Engineer. (RAMP)				
1.1.2	EXCAVATION IN ORDINARY SOIL				
	* Excavation shall mean the excavation and get out of the soil. Excavation in ordinary soil shall be measured by volume as the net void created by the excavation with				
	deduction made for existing voids.				
	* "Ordinary Soil" shall mean material yielding to ordinary excavation machinery or pick				
	axes.				
	* "Boulder" shall mean isolated volume of hard rock in ordinary soil and soft rock or above ground less than 1/2 cubic meter in volume.				
	aussie Broand 1635 than 1/2 capie lifeter ill volulile.				
1174	Pulk Evenyation in Ordinany Coll. Pulk avenuation to reduce the Natural array of Level to				
1.1.2.1	a depth not exceeding 100cm from reduced level.	m³	1,44		-
1.2	BACK FILL				
	* Fill to excavations or to make up level shall be made in suitable material approved by				
	the Engineer and capable of being compacted.				
	P Fill shall be placed in successive stages of not exceeding 200mm and watered and				
	compacted to approval by the Engineer. * The compaction achieved in filling shall be measured in accordance with the standard				
	practice. The In situ moisture content and density shall be compared with laboratory				
	test results of modified AASHO T147 performed on samples of the selected material.				
	* The minimum relative compaction to be achieved in the compacted area shall be 95%				
	maximum dry density and the moisture content shall be within the range of 95% dry density. The moisture content of the fill material shall be adjusted as necessary to				
	achieve the required compaction. Any material which after repeated compaction, does				
	not fulfill the requirements, shall be removed and replaced.				
	* The final levels of fill shall be adjusted, graded and prepared to receive bedding to be				
	laid on fill. Fill shall be measured as equal to the net volume of void to be filled and shall be understood as including the stockniling and baulage of material from location of fill				
1 2 1	Salacted horrowed fill. Suitable non expansive well graded seil or grapular material				
1.2.1	with no rock lumps imported from outside and approved by the Engineer. Fill works is				
	under floor slab and around footing pad as well a around foundation column.	m³	0,42		-
1.3	DISPOSAL				
	* All unsuitable and surplus suitable material arising from excavations shall be disposed off when instructed by the Engineer				
	* Disposal shall be made to tips directed by the Engineer or indicated in the document.				
	In the absence of direction from the Engineer or indication in the documents, it is the				
	contractor's responsibility to identify the appropriate tip and dispose the material.				
	* Disposal shall be understood to include stock piling, loading, transporting, dumping				
	the void created by the excavation, less excavated material backfill, filled and wheel				
	spread within site or left stockpiled.				
1.3.1	Cartaway surplus excavated material to a place where the administration has allotted				
	for disposal. The contractor is responsible for permission from relevant authorities.	m³	2,16		-
1.4	SUNDRY ITEMS				
1.4.1	HARDCORE AND STONE FILLERS				
	Haracore snail be sound approved stone of specified finishing thickness and placed as directed by the Engineer and finished blinded with 20mm crushed aggregate				
	an ence of the Engineer and minimed binded with 20mm crushed apprendie.				
	* loved some shall be reconcurred by the area of the sympace on which it is loved if the				

1.4.1.1	Hardcore under Ground floor slab to a thickness of 25cm and blinded with 20mm	m ²	0,42	-
	crushed aggregate.			
01				
02	CONCRETE WORKS			
2.1	Cast in Place Concrete			
	Cast in place concrete is concrete premixed at a batching plant and transported to the			
	work site or concrete whose ingredients are transported to the site and mixed just			
	before casting in place.			
2.1.1	50mm thick C-5 lean concrete with minimum cement content of 150kg/m3 of concrete			
	under			
2.1.1.1	Under Stone Masonry	m²	1,50	-
2.1.1.2	Under Ramp Slab	m²	2,10	-
2.1.2	REINFORCED CONCRETE			
2.1.2.1	REINFORCED CONCRETE GRADE C-25 (25 MPa) cast into formworks and vibrated			
	around rod reinforcement bars.			
2.1.2.1	In RAMP slab	m²	3,60	-
2.1.2.2	REINFORCEMENT BARS			
	Reinforcement work shall be understood as the supply and fixing of reinforcement bars,			
	Including ties and chairs. The steel bars shall be high tensile (Grade S-420) bot rolled deformed Reinforcement			
1	Steel bar			
2122	Rehar Diameter 8mm	ka	14.00	
2.1.2.2		ĸg	14,00	-
02			L	-
				-
03	MASONRY and BLOCKWORK			
3.1	STONE FOR MASONRY			
	Stone obtained from quarries approved by the Engineer shall be hard & sound, free			
	from vents, cracks, fissures, discoloration, or other defects that will adversely affect			
	strength or appearance. Stone chips out of which shaped stone are to be produced shall			
	not be less than 450mm average and 380mm individual length.			
3.1.1	Stone masonry Concealed from View: 50cm thick stone masonry bedded in cement	3	4.00	
	mortar (1:3) mix. price shall include cement mortar. (RAMP)	m°	1,20	-
3.1.2	Stone masonry Concealed from View: 80cm thick stone masonry bedded in cement			
	mortar (1:3) mix. price shall include cement mortar. (WATER TANKER BASE)	m³	13,25	-
02				
03	SOB TOTAL MASONRT WORK ETH BIRK			-
04	ROOF WORK			
04	Supply and fix transparent roof cover, fixed to the purlin. Price shall include water proof			
4,1	washers.	m²	5,00	-
- 04				
- 04				-
05	CARPENTRY AND JOINERY WORK			
- 05	Supply and fix 8 mm thick chin wood ceilings as per the Engineer's approval. Drice shall			
F 1	include (40x50)mm wooden battens with c/c spacing of 600 mm both ways, middle and		20.00	
5,1	corner list, and all other necessary accessories	m-	20,00	-
┣──				
05				
05	JUD I UTAL CARPENTRT AND JUINERT WURK ETH BIRK			-
00	PAINTING			
0.9				
9,1	Apply TWO coats of plastic emulsion naint. Price shall include nre - cleaning &			
	preparation of the surface. Remove all chalky surface, loose paint. dirt and other			
1	contaminants by wire brushing or by using paint remover. The area should be			
1	cleared/cleaned before and after the construction work.			
1				
9.1.1	To Internal walls	m²	105,36	 -
9.1.2	To External walls	m ²	15,36	-
09	SUB TOTAL PAINTING WORK ETH BIRR			-
			7	

10	SANITARY INSTALLATION WORKS			
10,1	Supply and install 10,000 liters capacity Fiber Glass water tank for ground reservoir with complete with required gate valves,Ø50mm, inlet(Ø50mm) and outlet pipe(Ø32mm), over flow (Ø40mm) & drain (Ø40mm), vent pipe and all the necessary accessories thereto. The tank shall be placed on flat surface concrete floor.	pcs	1,00	-
10	SUB TOTAL FOR SANITARY WORK ETH BIRR			-