SPECIFICATIONS AND BILL OF QUANTITIES WITH ENGINEERING ESTIMATE

PROJECT:

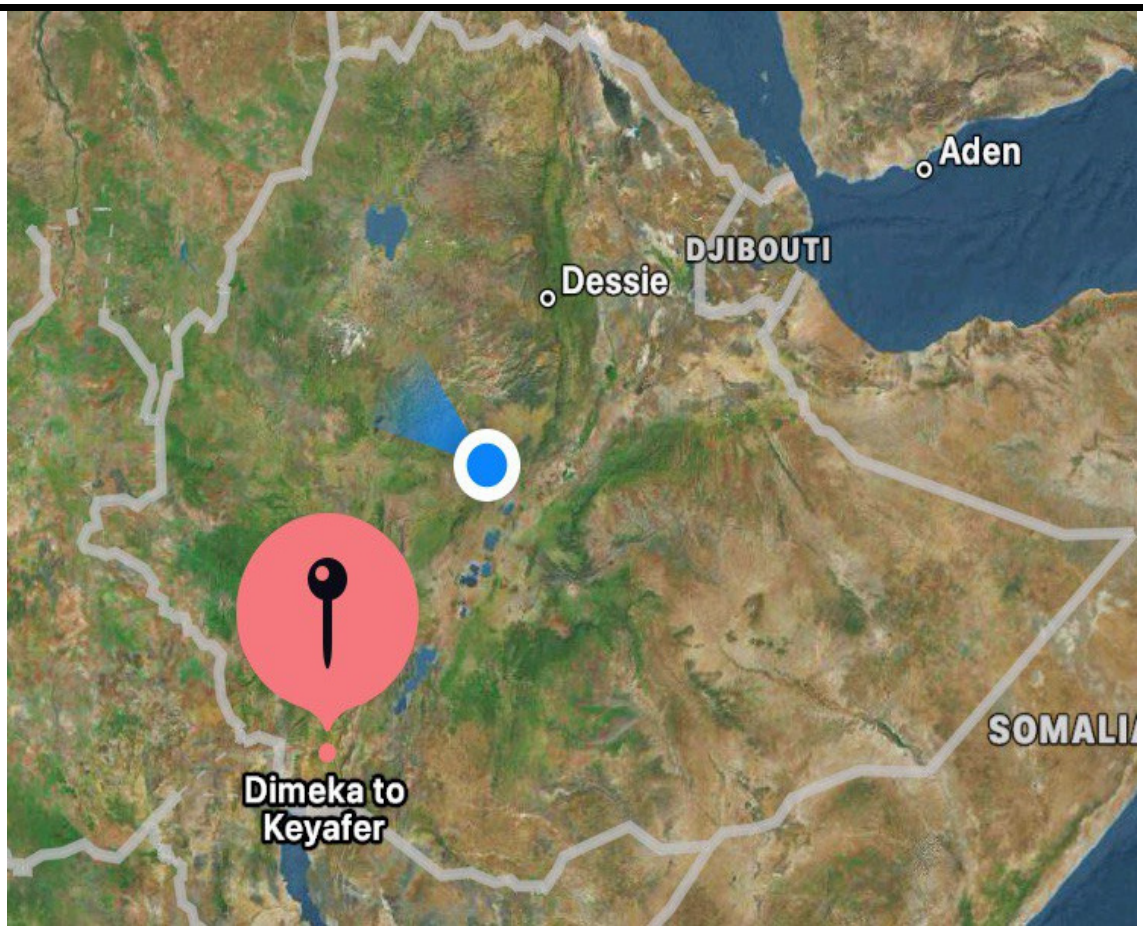
SOUTH OMO HEALTH POST REHABILITATION WORK

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**	-
	Birr	**-**
15% VAT	**Birr**	**-**
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)	m^2	3,60		-
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 a depth not exceeding 100cm from reduced level.	m^3	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. Þ 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.	m^3	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.	m^3	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.	m^2	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	2,10		-
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. **NB**: Form work and reinforcement steel will measured elsewhere.				
2.1.2.1.1	In RAMP slab	m^2	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	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)	m^3	1,20		-
03	**SUB TOTAL MASONRY WORK ETH BIRR**				**-**
04	**ROOF WORK**				
4,1	Supply and fix transparent roof cover fixed to the purlin. Price shall include water proof washers.	m^2	5,00		-
04	**SUB TOTAL ROOF WORK ETH BIRR**				**-**
05	**CARPENTRY AND JOINERY WORK**				
5,1	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 corner list, and all other necessary accessories	m^2	20,00		-
05	**SUB TOTAL CARPENTRY AND JOINERY WORK ETH BIRR**				**-**
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.				
6.1	Door size 280*80cm (External Toilet)	No	1,00		-
6.2	Double leaf metal Cover for the INCINERATOR combustion chamber	No	1,00		-
06	**SUB TOTAL METAL WORK ETH BIRR**				**-**
09	**PAINTING**				
9.1	Apply TWO 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**				**-**
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		-
11,3	**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. METAL WORKS	**Birr**	-
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 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)	m^2	3,60		-
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 a depth not exceeding 100cm from reduced level.	m^3	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. Þ 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.	m^3	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.	m^3	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.	m^2	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	2,10		-
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.				
2.1.2.1.1	In RAMP slab	m^2	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	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)	m^3	1,20		-
03	**SUB TOTAL MASONRY WORK ETH BIRR**				**-**
04	**ROOF WORK**				
4,1	Supply and fix transparent roof cover fixed to the purlin. Price shall include water proof washers.	m^2	5,00		-
04	**SUB TOTAL ROOF WORK ETH BIRR**				**-**
05	**CARPENTRY AND JOINERY WORK**				
5,1	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 corner list, and all other necessary accessories	m^2	20,00		-
05	**SUB TOTAL CARPENTRY AND JOINERY WORK ETH BIRR**				**-**
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 combustion chamber	No	1,00		-
06	**SUB TOTAL METAL WORK ETH BIRR**				**-**

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.				
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	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		-
11,3	**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**				**-**

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**				
	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 and WATER TANKER BASE)	m^2	19,60		-
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 a depth not exceeding 100cm from reduced level. (RAMP)	m^3	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. Þ 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. (RAMP)	m^3	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.	m^3	5,36		-
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.	m^2	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	2,10		-
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.				
2.1.2.1.1	In RAMP slab	m^2	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)	m^3	1,20		-
03	**SUB TOTAL MASONRY WORK ETH BIRR**				**-**
04	**ROOF WORK**				
4,1	Supply and fix transparent roof cover fixed to the purlin. Price shall include water proof washers.	m^2	3,00		-
04	**SUB TOTAL ROOF WORK ETH BIRR**				**-**
05	**CARPENTRY AND JOINERY WORK**				
5,1	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 corner list, and all other necessary accessories	m^2	20,00		-
05	**SUB TOTAL CARPENTRY AND JOINERY WORK ETH BIRR**				**-**
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 combustion chamber	No	1,00		-
06	**SUB TOTAL METAL WORK ETH BIRR**				**-**
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.				
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	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 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	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**				**-**

SEMBELE 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 - 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**				
	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 and WATER TANKER BASE)	m^2	19,60		-
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 a depth not exceeding 100cm from reduced level. (RAMP and WATER TANKER BASE)	m^3	12,64		-
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. Þ 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. (RAMP and WATER TANKER BASE)	m^3	3,07		-
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.	m^3	16,56		-
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.	m^2	0,42		-

1.4.1.1	Hardcore under WATER TANKER BASE to a thickness of 25cm and blinded with 20mm crushed aggregate.	m^2	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 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	2,10		-
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.				
2.1.2.1.1	In RAMP slab	m^2	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**				**-**
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)	m^3	1,20		-
3.1.2	**Stone masonry Concealed from View: 8**0cm thick stone masonry bedded in cement mortar (1:3) mix. price shall include cement mortar. (WATER TANKER BASE)	m^3	13,25		-
03	**SUB TOTAL MASONRY WORK ETH BIRR**				**-**
04	**ROOF WORK**				
4,1	Supply and fix transparent roof cover fixed to the purlin. Price shall include water proof washers.	m^2	3,00		-
04	**SUB TOTAL ROOF WORK ETH BIRR**				**-**
05	**CARPENTRY AND JOINERY WORK**				
5,1	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 corner list, and all other necessary accessories	m^2	50,00		-
05	**SUB TOTAL CARPENTRY AND JOINERY WORK ETH BIRR**				**-**
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 combustion chamber	No	1,00		-
06	**SUB TOTAL METAL WORK ETH BIRR**				**-**
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.				
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		-
11,3	**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	7		-
11,7	**Flush Mounted Socket Outlets with Earth Contact**				
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**	-
04. ROOFING	**Birr**	-
05. CARPENTRY AND JOINERY	**Birr**	-
09. PAINTING	**Birr**	-
10. SANITARY WORK	**Birr**	-
	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**				
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)	m²	3,60		-
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 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. Þ 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. * Hard core shall be measured by the area of the surface on which it is laid if the				

1.4.1.1	Hardcore under Ground floor slab to a thickness of 25cm and blinded with 20mm crushed aggregate.	m^2	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	2,10		-
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) hot rolled deformed Reinforcement Steel bar				
2.1.2.2	Rebar Diameter 8mm	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		-
3.1.2	**Stone masonry Concealed from View: 8**0cm 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**				
4,1	Supply and fix transparent roof cover fixed to the purlin. Price shall include water proof washers.	m²	5,00		-
04	**SUB TOTAL ROOF WORK ETH BIRR**				**-**
05	**CARPENTRY AND JOINERY WORK**				
5,1	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 corner list, and all other necessary accessories	m²	20,00		-
05	**SUB TOTAL CARPENTRY AND JOINERY WORK ETH BIRR**				**-**
09	**PAINTING**				
9.1	Apply TWO 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	105,36		-
9.1.2	To External walls	m^2	15,36		-
09	**SUB TOTAL PAINTING WORK ETH BIRR**				**-**

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**				**-**