

Lot#1

Name of location : Etit village

Scoop of work: Construction of Borehole #1

No	Items	Descriptions	Quantity	Unit Measurement	Unit price in IQD	Total price in IQD
1	Submersible pump	Install a submersible pump manufactured by a European country or Turkey with started (Autotransformer), with a motor and cable suitable for drinking water and the quantity of water mentioned below, it should be approved by the geologic expert, (only the manufactured by European countries will be acceptable) the component of the pump and control panel should be suitable with the specification of submersible pump and control panel and with all protection devices from burning (the motor can be burned if the level of water decrease in the borehole, heating the motor pump, decrease in volt level, replacement of electrical phase, installation of the submersible pump after receiving approval from relevant directorate and according to the instruction of supervisor engineer.				
		Q = 20 m3/h , H= 400 meters				
		Supply and install submersible pump with motor (SP30-46)	1	No		
		Supply and provide started autotransformer 30 KW (manufactured from European countries) and including all protection device	1	No		
2	Electrical work	Provide all required electrical parts including(Cable between the electrical board and panel, bolts, terminal, etc.) to connect and press the main cable of the motor pump and press the terminal and hang the starter, supply and install the circuit(100 amp) 3 phase (circuit breaker) in an electrical box with changeover (3phase 100 amp) and connect with the generator, and all required work of pump and pump room, the cost includes all requirements according to the instruction of supervisor engineer.				
		Supply and installation of (3-phase circuit breaker 100 amp) with electrical box, special for motor pump (manufactured in European countries) approved by relevant directorate and instruction of supervisor engineer.	1	No		
		supply and install 3 phase change over 100 amp inside box suitable for exchange(national power and generator power) manufactured by European countries approved by relevant directorate and instruction of supervisor engineer.	2	No		

		Provide electrical cable (underwater) (16*3 mm2) made according to standard(BS6500, NYY_VEDE) or equivalent to the same type, approved by the relevant directorate and instruction of the supervisor engineer.	140	M.L		
		Provide and install galvanized steel pipe (GI) with (a diameter of 3 inches, a weight of 8.3 KG/m, a thickness of 4 mm, length of 6 meters) according to specification (BS1387) all the accessories have to be the same type of GI(elbow, section, non-return valve, etc) approved by relevant directorate and instruction of supervisor engineer.	1	No		
Sub total 1						
Construction of pump room (4*3) meter						
3		All work has to be done according to the drawing and Iraqi technical instruction (IDTS-1993), instruction of the supervisor engineer, standard (SORB-2003), and also the instruction of tender. All material that will be used in project have to be tested according to (NCCL & R2004), and the approval have to be taken from Underground Water Directorate in Dohuk and the geophesic test have to be conducted for the selected location for drilling borehole.				
	Site preparation	Site preparation: flatten the site and modify it by dimensions (10*6m) with leveling and lifting all the undesirable material and debris, rubbish, and throwing out to the out of the border of the municipality. The work includes the creation of a simple road to the site.	1	LS		
		Excavations of foundations with all types of soil (width 80 cm * depth 70 cm) for the room.	8	m3		
		Provide material and machine to do backfilling inside the building with (tekala) and compacted well layer by layer, each layer should be 25 cm thick.	10	m2		
sub total 2						
4	Concrete work	Supply material (cement, sand, gravel, steel bar, water, wood frame, nylon,etc), manpower, and machine for concrete work, the cost includes curing and all work.				
		Lean concrete: supply material, manpower, and machine to do concrete work under the sub base (190kg/cm2) with a thickness(of 10cm) after laying down 2 layers of plastic sheet (should be 50 cm longer than excavated location)	1.5	M3		
		Sub-base concrete: supply material, manpower, and machine to do reinforced concrete work (240kg/cm2) with thickness (30cm)	3	M3		

		Roof concrete and over the windows: supply material, manpower, and machine to do reinforced concrete work (250kg/cm2) with thickness (15cm) with all needed wood frame and installing steel bar.	4	M3		
		Base concrete(ground of room and walkway): supply material, manpower, and machine to do ordinary concrete work (250kg/cm2) with the thickness (15cm) laying down on crashed stone layer (10cm) and install expansion joint for walkway each (2.5m)	2	M3		
5	Concrete block	Supply Materials and construction of the concrete block of the wall (15 * 20 * 40 cm) using mortar cement and sand (3: 1) the width of the block (20cm).	9	M3		
6	Electrical work	Supply material and technician person to conduct electrical inside and outside the pump room under the mortar using plastic pipe according to the drawing, the size of wire (1.5*2 mm2) or (2.5*2 mm2) with using steel box and strong bolts (16,12 mm) for all switch points (switch, circuit, etc) the supplier have to provide a list including all material with specifications to CARE to get approval before installation.				
		Supply and installation of lighting (compacted Fluorescent 1 * 40 watts) 4 feet of the covered type.	2	No		
		Supply and installation of rain protector light with the ability to protect 100 watts.	5	No		
		Supply and installation of switch (Circuit) (13, 15) AMP with all needed accessories	2	No		
		Supply and installation of a galvanized electricity column size 3 inches.	1	No		
		Supply and installation of cable 4*16mm2 connect it with the main board and main electricity column with all required accessories	30	M.L		
		Supply and installation main board with all accessories, automatic socket capacity (20) AMP, single Phis, main automatic socket capacity (80) AMP and all necessary work .	1	No		
7	Finishing work	Supply material and plastering the ceiling and walls in 3 layers with a thickness of at least 2 cm and using mortar cement and sand (3 : 1)	110	M2		
		Supply material and painting the walls and the ceiling with base layer of paint and 2 layer of amotion paint and according to the instruction of site engineer .	100	M2		
8	Steel work	Supply material and installation of a metal door with 2 faces (2.90× 2.6) m and one face pressed plate thickness (1.8mm) with steel angle line (25*25*3) mm, for 2 faces doors (37.5*37.5*3) mm, for one face door the frame should be (50*50 mm) with thickness (3 mm) with all required accessories (locks, kelon, painting the door (anti rusted paint) and with 3 layers of oily paint				
		The door of the pumping room (2.9*2.6) meter one face	1	No		
		The door of the pumping room (1.5*1.3) meter one face	1	No		
		Supply Materials and installation of metal windows, The work includes installation of the glass (4) mm, painting with anti-rust paint and oily paint.	2	M2		
9	Test of material	All construction materials have to be tested in (Central laboratory) and according to instructions of Western lab (NCCL&R2009)	1	L.S		
Sub total 3						
Total Amount						
Please Mention the brand and origin of the Submersible pump						

Lot#2						
Name of location : Etit village						
Scoop of work: Construction of Borehole #2						
All items have to be implemented according to the drawing and instruction of supervisor engineer,						
No	Items	Descriptions	Quantity	Unit Measurement	Unit price in IQD	Total price in IQD
1	Drilling Borehole	Access road and site preparation: open an access road to the selected site, remove all debris, and excavate the soil to the proper level.				
		Project workspace (100) m2	1	L.S		
		Supply materials and equipment for drilling the borehole with 12.5/8 inch depth (0 to X1) bit as shown in the drawing #1.				
		Drill with depth 15m =1X	15	Meter Depth		
		Reservation of the upper part of the borehole (casing pipe) by using ordinary iron pipes size 14 inches with thick not less than 5 mm.	15	Meter Depth		
		Supply materials, equipment, and required staff for casting the gap between the casing pipes and reservation pipes using ordinary concrete force 250 kg/cm2 from depth (0 to X1)and according to the drawing #1.				
		Drill with depth 15m =1X	15	Meter Depth		
		Supply materials, equipment, and staff for drilling the borehole with min diameter. 12.5/8 inch from depth (X1 to X2) and according to the drawing # 2				
		Depth 15m =X1				
		Depth 255 m = X2	255	Meter Depth		
		Supply materials and equipment to install casing pipe and slotted pipe using galvanized steel 8.5/8 inch manufactured and inspected according to the specification of (BS 1387) or similar, thickness of pipe not less than 5mm and width of the pipe opening not more than(3-5)mm. installation of casing pipe according to the soil layer at least (25%) of the total casing pipe (have openining) the head of the first pipe shall be sealed by a steel plate with a thickness not less than 6mm and according to the instruction of geological engineer				
		Depth of casing pipe (X) meter = 270 meters	270	M.L		

		Supplying the gravel used for filters according to the specifications of Iraqi measurements(1555) size (5.6-8) with workers and required tools for filling the space between the casing pipes and the walls of the boreholes.	1	L.S		
		Supply material and machine to wash the borehole using a compressor with pressure (X/10) a total of (X95% with a depth of pipe (1 inch and 3 inches) putting on casing pipe and operate until receiving clean water then the washing pipe to be removed from borehole pipe (remove water from borehole not less than 1 hour) by supervision of geological engineer	1	L.S		
		Supply material and machine (generator, pump, pipe, etc) to test the borehole, to identify all information regarding static and dynamic water levels, yield, and the geological log of the borehole(depth of the borehole, casing pipe, the layout of casing pipe, static and dynamic level, yield production, size of pipe, etc) according to the instruction of geological engineer	1	L.S		
		Conduct chemical, physical, and biological tests of water after cleaning the borehole in the laboratory to determine water potential for drinking or irrigation.	2	L.S		
		Supplying materials, requirements and making the base plate of galvanized steel with thickness not less than 10mm and punching the place of screws,pipes, cable with instilling it according to the instruction of site engineer	1	No		
Sub total 1 for drilling borehole						
1	Submersible pump	Install a submersible pump manufactured by a European country or Turkey with started (Autotransformer), with a motor and cable suitable for drinking water and the quantity of water mentioned below, it should be approved by the geologic expert, (only the manufactured by European countries will be acceptable) the component of the pump and control panel should be suitable with the specification of submersible pump and control panel and with all protection devices from burning (the motor can be burned if the level of water decrease in the borehole, heating the motor pump, decrease in volt level, replacement of electrical phase, installation of the submersible pump after receiving approval from relevant directorate and according to the instruction of supervisor engineer.				
		Q = 20 m3/h , H= 400 meters				
		Supply and install submersible pump with motor (SP30-46)	1	No		
		Supply and provide started autotransformer 30 KW (manufactured from European countries) and including all protection device	1	No		

2	Electrical work	Provide all required electrical parts including(Cable between the electrical board and panel, bolts, terminal, etc.) to connect and press the main cable of the motor pump and press the terminal and hang the starter, supply and install the circuit(100 amp) 3 phase (circuit breaker) in an electrical box with changeover (3phase 100 amp) and connect with the generator, and all required work of pump and pump room, the cost includes all requirements.				
		Supply and installation of (3-phase circuit breaker 100 amp) with electrical box, special for motor pump (manufactured in European countries) <u>approved by relevant directorate.</u>	1	No		
		supply and install 3 phase change over 100 amp inside box suitable for exchange(national power and generator power) manufactured by <u>European countries approved by relevant directorate.</u>	2	No		
		Provide electrical cable (underwater) (16*3 mm2) made according to standard(BS6500, NYY_VEDE) or equivalent to the same type, approved by <u>the relevant directorate.</u>	120	M.L		
		Provide and install galvanized steel pipe (GI) with (a diameter of 3 inches, a weight of 8.3 KG/m, a thickness of 4 mm, length of 6 meters) according to specification (BS1387) all the accessories have to be the same type of GI(elbow, section, non-return valve, etc) approved by relevant directorate.	18	M.L		
Sub total 2						
Total cost \$						
Please Mention the brand and origin of the Submersible pump						

Lot#3							
Name of Location : Etit to Emenki village							
Scoop of work: Extention pipeline (6 inch) (3750 Meter length)							
No	Items	Descriptions	Quantity	Unit Measurement	Unit price in IQD	Total price in IQD	Brand and Origin for materiles
1	Cutting the road (asphalt)	Supplying materials and manpower for cutting both sides of the trench pathway by using a cutter, to provide the location of the excavating trench with suitable width, according to the instruction of the supervising engineer lifting the demolition from the site to the dumping site specified by the municipality.	200	M.L			
2		Cutting the road to provide a pipe pathway by using a compressor to prepare the location for excavation work.	100	M.L			
3	Excavation work	Supply material and required machine and manpower to excavate the trench for pipe pathway in all types of surfaces (Rockey and soil) in the dedicated location that will be identified by the relevant municipality to ensure the depth of pipe will be suitable with the master plan of the municipality to construct the road in future. the leftover soil and rocks from the excavation work have to be put far away from trench sides around 60 cm. According to the supervisor engineer, the depth and width of the trench will be different: - If the depth of the trench is 2 meters the width should be 70 cm. - If the depth of the trench is 3 meters the width should be 90 cm. - If the depth of the trench is 4 meters the width should be 100 cm. The cost included damping the leftover material to the selected location by the municipality and all work will be conducted according to the supervisor engineer.					
		Excavation of trench with a width of 60cm for ductile pipe for pipe with a 6-inch diameter and the depth of trench will be 1-meter.	3750	M.L			
4	Supply and installation of pipe	Supply and installation of ductile Pipes manufactured with specification (ISO2531 and BSEN545) class (K9) with the type (Tyton) and have been approved in (WRAS) test and are suitable for drinking water will all needed accessories(elbow, flange, coupler, etc) and with the type (K12) and also T section should be with the type (K14), and according to the specification mentioned in the pipe section. Connecting pipe using the socket-spigot method. the cost includes supply, installation, transportation, connection, all needed accessories, and conducting a quality test of material in the relevant directorate after approving the material and installing the pipe and accessories in the field. all work has to be done according to drawing and supervising engineer.					
		Ductile pipe (DI) manufactured with (ISO2531 and BSEN545) and class(K9) with the type (Tyton) and has approved (WRAS) test and is suitable for drinking water, with a size of 6-inch diameter.	3750	M.L			
5	Connection of pipe (using pressing and washer)	supplying the required materials and accessories for connecting the pipe by using pressing and washers, the cost will include supplying material, transportation, and connection of pipe in the field, and providing approval of quality testing of used material from the relevant directorate. And the work has to be conducted by experts in this field according to the plan and instruction from the supervisor engineer.					
		Connecting Ductile pipe with size (6-inch) diameter.	3750	M.L			
6	Supply and installation of water network accessories	Supply and connection of water network accessories in required locations according to instruction of the supervisor engineer (manufactural approval from the manufactured company)					
		Ductile section with diameter (6-inch) capacity 16 bar.	2	No			
		Ductile Elbow and half elbow with a diameter (6-inch) capacity 16 bar.	15	No			
		Socket ductile with dimeter 6 inch , capacity 16 bar	8	No			

7	Supply and install water valves	Supply and install water valves with Spendia with type(Resilient Seated Gate)flange and approved according to stander(BS5163) and pressure (PN16bar.PN40 bar) manufactured from European countries with (manufacturing certificate) and all accessories (bolt, nut, washers, etc) and رينجي شفتي manufactured from (stainless steel) and رينجي شفتي manufactured from (Brasi), and all other materials manufactured from European countries. The cost includes all supplies, transportation, work, installation to the work location, and conducting quality test and installation after getting approval from the relevant directorate, All work will be done according to the supervisor engineer.				
		Ductile valve (تفرغ) 3-inch (Gate valve) with a capacity 16 bar with all required accessories.	1	No		
		Ductile Chuck valve (6 inch) (40bar) with all required accessories.	2	No		
8	Supply single orifice valves	Supply and install Single orifice valves with flanged get valves with all required accessories and galvanized bolts (manufactured in European countries and approved by Iraqi standards) pressure (PN 16 Bar) and manufactured by European countries (have manufactured certificate) and all accessories prepared for welding by (Dc welding machine). The cost includes all supplies, transportation, work, installation to the work location, and test from relevant directorate, all work will be done according to the supervisor engineer.				
		Ductile flanged gate valve (3 inch)(16 bar)with all required accessories	5	No		
		Ductile single orifice valve (3 inch)(16 bar)with all required accessories	5	No		
9	Construction of manhole	Supply material and manpower to construct manholes for valves with the roof of manholes, constructed from concrete blocks (40*20*15cm) with a depth of wall of 20cm, for the base of manhole include galvanized steel bar (epoxy painted) with (16 millimeters) in width 30cm. and plastering the manhole walls with cement and sand (with ratio 3:1)with a stable frame with thickness of 15 cm except the valve location the concrete strength should be not less than (210 kgm /cm2) and installed in one layer of crashed stone with depth (10cm). construction of roof of manhole with reinforced concrete with depth (20cm) and install plastic pipe (4 inch) with length of depth of roof to fix steel box (BS5834_2Grade A) to enable controlling opening and closing vave. The work will be conducted accrodg to instruction of supervicer engineer.				
		construction of a manhole (1.6 *1.2) meter from inside the manhole and with a suitable depth according to the installation of pipe for the valve, and the manhole gate have to be made by steel plate (5mlm) with all required accessories.	7	No		
10	Backfilling of trench	Supply the required material and machine to do backfilling for the water pipe trench (DI.PE) layer by layer, according to the planned profile in the workplace, the trench should be clean from leftovers debris (rocks, crushed stone, construction material, wood,, etc) and with installing the (Phosphoric nylon index) to identify the pipe pathway, and the beneath of pipe should be flat without any slope, the cost include the materail and menpower to fill the trench according to the instruction of supervisor engineer.				
		For polyethylene pipe PE: provide a layer of fine sand around the pipe with a depth of (15 cm) and ensure the sand is compacted well beneath and around the pipe to prevent entrance of air, and then provide a layer of clean soil (clean from stone) with depth of (30cm) and compacted, and the leftover depth of trench will be filled with clean soil (without stone) and should be compacted well by machine, and install (Phosphoric nylon index) through the length of pipe, with (width 30cm and depth 20cm) in the last layer, the work will be done according to instruction of supervisor engineer.	3750	No		
11	Construction of road(concrete or sulfate)	Supply material and machine to re-construct the road that has been destroyed during pipeline construction work, provide a layer of sub base (depth 20cm), and compacted 95% and provide a layer of asphalt with depth (6cm) and use type (Binder), and for concrete road, provide concrete layer 15 cm (250 kg/cm2) with the width of the trench with installing BRC with a diameter (6mlm), for asphalt the marshal strength should be 12KN and provide one layer of the prime coat with (0.5 L/m2) with all required work according instruction of supervisor engineer and specification band (R9)(R&A)(SORB)	60	m2		
12	Connection of new pipeline with existing network	Supply material and machines to connect the new pipeline with the existing water network, the cost includes the all required material (elbow, section, etc) and according to instruction of supervisor engineer	2	No		
Total Amount						