



IB-PAL-0000111322

**Project Name: Constructing Medical Waste Treatment
Facility in Gaza Governorate**

Bill of Quantities - BOQ

Electronic copy of the BOQ shall be submitted along with the signed hard copy thereof. In case of any discrepancy between the soft and the hard copies, the hard copy shall prevail.

August, 2020

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
BILL 01- GENERAL ITEMS (INCLUDED)					
The contractor must consider in his price to provide the following items at least:					
-	Provide office facilities for the consultant staff on site as specified per general and special conditions including all provisions and maintenance. The offices shall be provided within 1 week from the date of commencement until one month after the Taking over Certificate.				
-	Provide Main Signboards as specified per general and special conditions installed within 1 week from the date of commencement at locations agreed with the Engineer, maintained until the end of the Defects Liability Period and then removed.				
-	The Contractor shall submit to the Consultant Engineers after signing the contract (Maximum one week), three Hard Copies of all Design Drawings (Paper size is A2+A3 upon engineer satisfaction).				
-	The Contractor shall submit to the Engineer or his Representative an approved one electronic set (AutoCAD Program) and 5 printed sets of As-Built Drawings including all drawings, exact levels of the executed works required according to General Conditions, Specifications, Drawings and Contract Documents. The As-built drawings shall include the actual coordinates of all structures and facilities (X, Y, Z) according to all requirement of the Municipality.				
-	All Team Staff as described in General and specific condition.				
-	Others as described in all tender documents (SEEN OR UNSEEN). If there is any discrepancy in tender documents, the contractor must consider it in his price which is completely his responsibility.				
-	<p>UNDP has just published in the POPP the new Construction Works Policy (HYPERLINK https://eur03.safelinks.protection.outlook.com/?url=https%3A%2F%2Fpopp.undp.org%2FSitePages%2FPOPPSubject.aspx%3F\$BJID%3D487%26Menu%3DBusinessUnit%26Beta%3D0&data=02%7C01%7Cmaged.ghannam%40undp.org%7Ccb75f5a326de4ccfbcbf08d809fa4210%7Cb3e5db5e2944483799f57488ace54319%7C0%7C0%7C637270317758240258&sdata=AzWSmVvWQy0GE0S%2B1UJeXbt1p8wtBqZsjrt3IEFgaw%3D&reserved=0) and Guidance Note (HYPERLINK https://eur03.safelinks.protection.outlook.com/?url=https%3A%2F%2Fpopp.undp.org%2F_layouts%2F15%2FWopiFrame.aspx%3F\$Sourcedoc%3D%2FUNDP_POPP_DOCUMENT_LIBRARY%2FPublic%2FPSU_Construction%2520Works_Construction%2520Works%2520Guidance%2520Note.docx%26action%3Ddefault&data=02%7C01%7Cmaged.ghannam%40undp.org%7Ccb75f5a326de4ccfbcbf08d809fa4210%7Cb3e5db5e2944483799f57488ace54319%7C0%7C0%7C637270317758250251&sdata=36MrOxukJAhsTFgurXfpMjkWybc7Mr140k%2BVeKdjp%3D&reserved=0)</p> <p>The Construction Works Policy applies to all construction works undertaken by UNDP in its development activities and management projects, covering all aspects of construction such as civil, mechanical, electrical, and associated works.</p>				
-	The local regulations of the Ministry of Housing and public works regarding under COVID19 restrictions should be followed and included in the pricing of the BoQ.				
BILL B1 (General Items)					INCLUDED

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
BILL 02 - EARTH WORKS					
-	<i>All the following items shall be completed according to drawings, specifications, conditions and as directed by the Engineer or his representative.</i>				
-	<i>Quantities of excavation shall be measured according to the plain concrete footing plan multiplied by the average excavation depth. Quantities of the Backfilling shall be measured according to excavation quantity subtract the elements mentioned in the drawings. The excavated amounts of sand are not allowed to be transferred to any location outside the construction area.</i>				
-	<i>Suitable Excavated Clean sand or kurkar soil material (excavated only from the project site boundaries) should be used for back-filling in layers (25cm max. each & compaction test 98%), selected from the approval excavated soil or imported.</i>				
-	<i>Back-filling item should be in layers (25cm max. each & compaction test 98%). Prices shall includes supplying, wetting, compacting, transporting, testing and any works else needed, all according to drawings, specifications, conditions and directed instructions by the Engineer or his representative.</i>				
-	<i>Supply and install temporary steel protection fence during the whole construction duration with not less than 2 meters height with appropriate gates.</i>				
-	<i>Prepare leveling grid for the site before excavation works within 5/5 meters and do surveying for the site with coordinates.</i>				
2.1	Levelling the whole project site. Prices include site levelling, removal of any buried structure not to be part of the proposed construction, transportation of existing basecourse material stockpiles to locations approved by the engineer, dismantling the existing fence and handle it to the client, demolish of existing concrete beams, relocate the existing trees, transport of excavated material a location approved by the engineer or his representative outside the site, workmanship and any other works else needed, all according to drawings, specifications, conditions and directed instructions by the Engineer or his representative.	Lump Sum	1.0		\$ -
2.2	Excavation from natural ground level for the building foundations up to the required design level. The works include compacting the natural soil surfaces under footings to (98% of MDD) and removing any debris outside the site to an approved dumping area, all works according to Engineer's instructions and specifications.	M ³	190.0		\$ -

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
2.3	Backfilling at areas shown on the drawings by using Approved Excavated Material from the site, include supply, spreading, leveling, watering and compaction in layers not exceed 25 cm for each layer. (compaction test to 98% of MDD). All works according to drawings, specifications and engineer's instructions.	M ³	100.0		\$ -
2.4	Ditto, but backfilling using imported Kurkar from outside the site with all required works.	M ³	280.0		\$ -
<u>TOTAL OF BILL 02 - EARTH WORKS</u>					-
<u>MOVE TOTAL TO SUMMARY</u>					

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
BILL 03 - CONCRETE WORKS					
-	<i>All concrete items shall be completed according to drawings, specifications, conditions and as directed by the Engineer or his representative. All the following items shall be included in the prices but not limited to:</i>				
-	<i>Prices of all concrete items shall include shuttering, formwork, scaffolding, Slopes in concrete for drainage purposes, labour, supports, tie rods, spacers, steel reinforcement with shaping and fixing, testing of reinforcement steel, cement and concrete, supply and placing of concrete, Mix Design, vibrating, curing, painting of the external surfaces of underground concrete with (one coat of primer & min. 2-coats of hot bitumen - 75/25), gauge 250 polyethylene sheets for concrete casted on soil, workmanship, trowelling, ducts, sleeves, opening areas, etc.</i>				
	<i>The contractor must provide a 3D steel scaffolding for the microwave machine hall slab casting activity. The contractor must provide a method statement and calculations for the scaffolding to be approved by the engineer.</i>				
-	<i>The contractor has to submit shop drawings for engineer's approval before starting any works.</i>				
-	<i>The contractor shall provide, erect and maintain all safety measures requirements according to specifications, local laws and engineer's instructions.</i>				
-	<i>Any design faults and discrepancies must be reported to the engineer and any design corrections shall be incorporated in the prices.</i>				
3.1	<u>CONCRETE (B - 250):</u>				
3.1.1	Supply and cast ready mix reinforced concrete (B-250) for Foundations with all required works, include polyethylene sheets with 250 micron thickness, All works are according to drawings, specifications and engineer's instructions.	M ³	52.0		\$ -
3.1.2	Ditto, But R.C. (B-250) for Ground Beams with its supports with all required works.	M ³	40.0		\$ -
3.1.3	Ditto, but R.C. (B-250) for Ground Slabs (7cm thick) including reinforcement (1T8mm @ 20cm in both directions), polyethylene sheets under slab, leveling, compaction of sub-grade, mechanical trowelling, with all required works, according to drawings, specifications and engineer's instructions.	M ²	220.0		\$ -
3.1.4	Ditto, but R.C. (B-250) for Ground Slabs (15cm thick) including reinforcement (1T10mm @ 20cm in both directions), polyethylene sheets under slab, leveling, compaction of sub-grade, expansion/contraction joints, mechanical trowelling using suitable colour powder, and all required works, according to drawings, specifications and engineer's instructions. The item includes painting the routing lines and arrows with line marker.	M ²	160.0		\$ -

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
3.1.5	Ditto, but R.C. (B-250) for Architectural Works , decorative concrete, with minimum reinforcement of 75 kg/m ³ with all required works.	M ³	5.0		\$ -
3.1.6	Ditto, but R.C. (B-250) for Main Building Stairs , flights, landings and stairs drop beams with all required works.	M ³	6.0		\$ -
3.1.7	Ditto, but R.C. (B-250) for External Steps, Stairs Handrail, Ramps, decks, electrical trenches and likes with all required works.	M ³	6.0		\$ -
3.1.8	Supply and cast ready mix reinforced concrete (B-250) for Ribbed Slabs (Hollow block slab) 25cm thick for all floors slabs. The price includes Slopes in concrete for drainage purposes , reinforcement, 40x25x17cm hollow concrete blocks, drop and inverted beams, electrical and mechanical installations, ducts and workmanship. All works shall done according to drawings, specifications and engineer's instructions.	M ²	670.0		\$ -
3.1.9	Ditto, but R.C. (B-250) for Solid Slabs 15cm thickness (stairs and elevator upper slab). Price includes concrete, reinforcement, Slopes in concrete for drainage purposes , drop and inverted beams, mechanical and electrical installations and workmanship with all required works.	M ²	30.0		\$ -
3.2	<u>CONCRETE (B - 300):</u>				
3.2.1	Supply and cast ready mix reinforced concrete (B-300) for Neck Columns, Columns and Elevator Walls with all required works according to drawings, specifications and engineer's instructions.	M ³	50.0		\$ -
TOTAL OF BILL 03 - CONCRETE WORKS					-
<u>MOVE TOTAL TO SUMMARY</u>					

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
BILL 04 - BLOCK, PLASTERING & PAINTING WORKS					
-	<i>All the following items shall be completed according to drawings, specifications, conditions and as directed by the Engineer or his representative.</i>				
-	<i>Prices of block works shall include supply of hollow concrete blocks from good and approved factory in perfect dimension and build it in good manner, cement sand mortar (1:3), but the first 40 cm from the bottom of wall the cement to sand ratio is (1:1), concrete fillet (B250) between columns, post, sills, lintels, canopies, block walls (equal to block wide minimum, and height 20 cm minimum or other wise noted in the drawing), compressive strength 35kg/cm2, works shall include all materials, testing, scaffolds, placing of approval blocks, workmanship, all ducts , sleeves, opening areas, fiber board, protection concrete (B-200) around sleeves and pipes (for electrical, sanitary & mechanical), tools and anywhere else, needed, all according to drawings, specifications, conditions and directed instructions by the Engineer or his representative.</i>				
-	<i>Installing of block is not allowed before 28 days of manufacturing day, and the contractor should submit manufacturing day certificate.</i>				
-	<u>Price of block works shall include supply and cast (B250) for sills, lintels, coping, posts, parapets, arches, decoration, electrical and mechanical sleeves. The reinforcement for sills, lintels and parapet is according to drawings and engineer's instructions.</u>				
-	<i>Prices of plastering works shall include supply of all materials, galvanized angles (for exposed edges), galvanized mesh (between block wall and concrete), mixing, scaffolds, curing, workmanship & tools and anywhere else, needed, all according to drawings, specifications, conditions and directed instructions by the Engineer or his representative. Price to include fully filling the joints both horizontally and vertically with 1cm mortar</i>				
-	<i>Rendering layer with Tyrolean machine is required for all wall before starting plastering works, and after cleaning all walls from tying wires.</i>				
-	<i>Starting new layers of plaster is not allowed before getting permission from site engineer.</i>				
-	<i>Curing plaster layer 3 days minimum by water spray.</i>				
-	<i>Paints should be from first Class Paint company which has certified from Palestine Standards Institution. The paints will be tested before approval and all test will be required.</i>				
-	<i>Prices of painting works for walls (approved by the Engineer according to catalogue/ sample for the used type, colour, and quality) shall include supply of all materials, scaffolds, workmanship & tools and anywhere else, needed, all according to drawings, specifications, and testing, conditions and directed instructions by the Engineer or his representative.</i>				
-	<i>Plaster cracks should be cured by Fiber- Flex before painting.</i>				
-	<i>First primer coat layer (Bendrol) should be repaint if exceed one week without starting any new paint' layer, and must be colored.</i>				
-	<u>Prices of painting shall include mixing colors by computer, and all colors are required in pricing.</u>				
-	<i>Colors and degree of color hue and saturation will be determine by supervision team.</i>				
-	<i>Minimum number of coating layers mean that wall shall be coated and saturated and if the mentioned minimum layers are not enough, the contractor should adding new layers without claiming extra costs.</i>				
-	<i>All amount of needed of paint drums and paint' material should be stored in the storage which must be prepared by contractor, and its keys will be with site engineer</i>				

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
4.1	<u>BLOCK WORKS:</u>				
4.1.1	Supply and install Concrete hollow blocks for walls (40x20x20) cm with all required works, according to Eng. instructions and specifications.	M ²	1350.0		\$ -
4.1.2	Ditto but for (40x20x15) cm.	M ²	10.0		\$ -
4.1.3	Ditto but for (40x20x10) cm.	M ²	10.0		\$ -
4.2	<u>PLASTERING:</u>				
4.2.1	Internal Plastering three layers for internal walls, partitions, edge beams, columns, soffits and likes, min. thick 15mm with all required works, according to Eng. instructions and specifications.	M ²	1700.0		\$ -
4.2.2	Internal Plastering three layers for ceilings, landing and likes min. thick 20 mm with all required works, according to Eng. instructions and specifications.	M ²	600.0		\$ -
4.2.3	External Plastering of ECAS "Italic plastering" for external walls/elevations, the first layer is plaster three layers, the second layer is Bondrol paint, the final layer is ECAS. <u>The work also includes Siliconate coating Paint Anti-Absorption & prevention layer with all required works.</u> The price includes all decorations, logos, drawings, etc. according to Eng. instructions and specifications.	M ²	920.0		\$ -
4.3	<u>PAINTING:</u>				
4.3.1	Internal Painting for internal walls of Silk Finish Paint, 1 layer primer Coat (Pendrol), 2 layers of putty minimum, 2 layers of Supercryl paint minimum and 2 Layers of Silk Finish Paint minimum with all required works, according to Eng. instructions and specifications.	M ²	680.0		\$ -
4.3.2	Internal Painting for internal walls of Supercryl paint. 1 layer primer Coat (Pendrol) and 2 layers of Supercryl paint minimum with all required works, according to Eng. instructions and specifications.	M ²	920.0		\$ -
4.3.3	Internal Painting for ceiling of Supercryl paint. 2 layers minimum with all required works, according to Eng. instructions and specifications.	M ²	600.0		\$ -
4.3.4	Painting for internal parapet walls (at roofs) . 1 layer primer Coat (Pendrol) and 2 layers of Supercryl paint minimum with all required works, according to Eng. instructions and specifications.	M ²	120.0		\$ -
TOTAL OF BILL 04 - BLOCK,PLASTERING, PAINTING & GYPSUM WORKS					-
<u>MOVE TOTAL TO SUMMARY</u>					

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
BILL 05 - TILING, FLOORING & MARBLE WORKS					
-	<i>All the following items shall be completed according to drawings, specifications, conditions and as directed by the Engineer or his representative.</i>				
-	<i>Prices of Tiles & Marble works shall include supply of all materials, testing, mortar, sand bedding under tiles or marble or back the tiles or marble (wall), skirting, workmanship, opening areas and all materials & tools, testing and any works else, needed, all according to drawings, specifications, conditions and as directed by the Engineer or his representative.</i>				
-	<i>Grade A Spanish made of good quality imported tiles (floor & walls) shall be used.</i>				
-	<i>Only Grade A for Marble & Granite shall be used, free from cracks, holes and pits, homogeneous in the approval color</i>				
-	<i>The Prices of Tiles & Marble works also include tile cutting, 45 degree cutting, grouting works, filling with special adhesive, decoration and pattern with additional costs, using multi color of same approved tiles, using any other needed size of same approved tile, adding aluminum or stainless steel or laminated color steel corner angles and strips, cleaning, sanding and polish .</i>				
-	<i>Rendering layer with Tyrolean machine is required for all wall before installing of wall tiles.</i>				
-	<u>All tiling works will be cured and filled with marble grout. White cement should be used for porcelain fixing.</u>				
-	<u>Geometrical measurements without any additional costs for decoration, grooves and patterns (Surface Area).</u>				
5.1	<u>Floors Tiles & Finish:</u>				
5.1.1	Supply and install Glazed floor Porcelain tile size: 600x600x10 mm, Spanish made, Porcelain skirting of same kind and color and its size: 600x100x10 mm with all required works. The price includes cement and sand mortar bedding laid on dry mixed sand and cement backfill. All works according to drawings, specifications, conditions and as directed by the Engineer or his representative.	M ²	150.0		\$ -
5.1.2	Ditto, but supply and install Non-Slip Floor Ceramic tiles size: 300x300x8 mm, Spanish made, Ceramic skirting of same kind and color (if needed) and its size 300x100 mm with all required works. All works according to drawings, specifications, conditions and as directed by the Engineer or his representative. <u>The item includes installation of two layers of Hot bitumen on the R.C Slab and the cement mortar angle.</u>	M ²	140.0		\$ -

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
5.1.3	Supply and install Terrazzo tiles (Marble Chipset) size 300x300x30 mm, Terrazzo skirting of same kind and color, size 300x70x15 mm (if needed) with all required works. All works according to drawings, specifications, conditions and as directed by the Engineer or his representative.	M ²	30.0		\$ -
5.1.4	Supply and install Rosabita Marble Type 664 tiles size: 600x300x20 mm <u>for staircases landings</u> , with all required works, all works according to drawings, specifications, conditions and as directed by the Engineer or his representative.	M ²	20.0		\$ -
5.2	<u>Walls Tiles & Finish:</u>				
5.2.1	Supply and install White Glazed Wall Ceramic Tile size: 200x200x6 mm for with all required works. All works according to drawings, specifications, conditions and as directed by the Engineer or his representative.	M ²	500.0		\$ -
5.2.2	Supply and install Granulate Finish Layer for main entrance external Ramps, stairs and Ramps' walls with Capping sill with all required works , all works according to drawings, specifications, conditions and as directed by the Engineer or his representative.	M ²	15.0		\$ -
5.3	<u>Marble Works :</u>				
5.3.1	Supply and install Rosabita Marble 2 cm type 664 thick for window sills and Parapet with 1cm rain off groove, with all required works, all works according to drawings, specifications, conditions and as directed by the Engineer or his representative.	M ²	50.0		\$ -
5.3.2	Supply and install Rosabita Marble 3 cm thick type 664 for Doors thresholds with all required works, all works according to drawings, specifications, conditions and as directed by the Engineer or his representative.	M ²	9.0		\$ -

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
5.3.3	Supply and install Rosabita Marble type 664 for staircase Steps, except last three flight (<u>Rosa Bita Marble for Treads 3cm thick</u>), (<u>Rosa Bita for Risers 2 cm thick</u>). <u>The works include skirting of 10 cm height of 2 cm thick Rosa Bita marble for each treads sides</u> with all required works, all works according to drawings, specifications, conditions and as directed by the Engineer or his representative.	MR	70.0		\$ -
5.3.4	Supply and install Marble counter for buffets Rosabita Marble 2-3 cm thick type 664) for Kitchenette 60-70 cm wide & 90 cm height, the works including: <ul style="list-style-type: none"> - The top surface of 2 cm thick of Rosabita Marble with double/ round edges. - Water prevention (5 cm Height) of Rosabita Marble 2 cm thick rounded. - Vertical dividers of 3 cm thick Rosabita Marble. - Vertical Riser of 2cm thick Rosabita Marble for Sink Cabinet. - Internal horizontal shelves of 2 cm thick Rosabita Marble. - Floor skirting 10cm height of 2 cm thick Rosabita Marble. <ul style="list-style-type: none"> - Lower Cabinet: Aluminum and Composite (Double sided and acoustic isolated leaves) including one drawers unit minimum with all needed accessories and works. All with making the needed opening for basins and according to drawings, Specifications, conditions and as directed by the Engineer or his representative.	MR	3.0		\$ -
<u>TOTAL OF BILL 05 - TILING, FLOORING & MARBLE WORKS</u>					-
<u>MOVE TOTAL TO SUMMARY</u>					

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
BILL 06 - WOODEN, ALUMINUM & METAL WORKS					
-	<i>All the following items shall be completed according to drawings, specifications, conditions and as directed by the Engineer or his representative.</i>				
-	<i>Price of Galvanized Steel works include supplying, workmanship, Hammer Finish Paint (Poly zinc Paint base coat & min. 2 layers of Hammertron Finish Paint), fixation (all galvanized steel frames should be filled with the fine aggregate rich mortar concrete), hinges, handles and all necessary parts needed to complete the works.</i>				
-	<i>Only Grade A for any type of wood Free of wooden knots.</i>				
-	<i>Price of doors or windows or other metal works (if needed), the works includes supplying, workmanship, fixation for lock type is Viro or equivalent for steel door and Viro or equivalent for wooden, complete and all necessary parts needed to complete the works.</i>				
-	<i>Price of colored Aluminum windows or doors (Approved type Section 2000 or 4500 or 7000 ambatia or other like specified) includes supplying, workmanship, fixation, hinges, <u>clear Glass 6mm for 7000</u> , <u>except section 2000 profile 10 mm clear Glass triplex gelatin and 2000 Door 6 mm Sandblasted stickers strips 10 cm solid and 3 cm Void for 1.2 m height</u>, lock type (for door) is approved European type of good quality, handles and all necessary parts needed to complete the works</i>				
-	<i><u>All Aluminum profile should be not less than 1.4 mm thick, and powder paint should be 60-90 Micron, anodized paint should be 20-25 micron</u></i>				
-	<i><u>IMPORTANT: handles of aluminum doors [8 doors] for each of (clean change, shower, cloth wash, dirty change and related buffer spaces) will be one way open handle, able to open door from one side and not able for the another side.</u></i>				
6.1	<u>MULTI- LOCK DOORS:</u>				
6.1.1	Supply and install of (M.L.D 1) Multilock door size 150x230 cm two leaves. The scope of works include joineries, accessories, 1.5 mm galvanized steel frame, MUL-T-LOCK switch , door Aluminum magnetic stopper, hammer powder coating paint for leaves, all and anywhere else, needed, all works according to drawings, specifications, conditions and directed instructions by the Engineer or his representative.	NO	1.0		\$ -
6.1.2	Ditto, (M.L.D 2) Multilock door size 130x230 cm two leaves.	NO	1.0		\$ -

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
6.1.3	Ditto, (M.L.D 3) Multilock door size 100x230 cm one leaf.	NO	4.0		\$ -
6.1.4	Ditto, (M.L.D 4) Multilock door size 100x230 cm one leaf. <u>with emergency Panic Bar for Egress Exits.</u>	NO	2.0		\$ -
6.1.5	Ditto, (M.L.D 5) Multilock door size 80x230 cm one leaf for IT Room	NO	1.0		\$ -
6.2	<u>ALUMINUM DOORS:</u>				
6.2.1	Supply and install of (AL.D1) Aluminum & Glass Door for office, Powder coated colored profile 2000 type (66/40) size 90x220 cm one leaf, hinge system, with 6 mm clear Glass, complete with, silicone sealant, ironmonger, switch and hardware and all and anywhere else, needed, all work according to drawings, specifications, conditions and as directed by the Engineer or his representative.	NO	5.0		\$ -
6.2.2	Supply and install of (AL.D2) Aluminum Door size 80x220 cm one leaf (for toilets, W.Cs and Buffets), Powder coated colored profile 2000 type (66/40), hinge system, with 4mm double side composite panel and 40 cm height of 6 mm industrial sandblasted glass, complete with, silicone sealant, ironmonger, switch and hardware and all and anywhere else, needed, all work according to drawings, specifications, conditions and as directed by the Engineer or his representative.	NO	14.0		\$ -
6.2.3	Supply and install of (AL.D3) Aluminum Door size 150x220 cm two leaves, Powder coated colored profile 2000 type (66/40), hinge system, with 4mm HPL (High Pressure Laminate solid phenolic) Panel, complete with, silicone sealant, ironmonger, switch and hardware and all and anywhere else, needed, all work according to drawings, specifications, conditions and as directed by the Engineer or his representative.	NO	4.0		\$ -

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
6.3	<u>STEEL DOORS:</u>				
6.3.1	Supply and install of (S.D 1) Galvanized steel Sliding door size 500x610 cm, Sliding system with two leaves. of main G.S Profile 100x100x3 mm and secondary G.S Profile 100x50x3 mm with 2 mm G.S sheets up to 4 m and Louvers sheets up to top frame The scope of works includes all needed accessories, frame, rails, castors, Rollers, spinners, switch, door stops, handles, painting with one coat of polyzinc primer and two coats of hammer paint, all and anywhere else, needed, all works according to drawings, specifications, conditions and as directed by the Engineer or his representative.	NO	1.0		\$ -
6.3.2	Supply and install of (R.S.D 1) Galvanized steel Roll Up door size 350x350 cm, roll up system . The scope of works includes all needed accessories, Flat slats 3"x1/2" galvanized steel, frame, side tracks, rolling springs, rolling top balance, galvanized steel hood, switch, door stops, handles, painting with one coat of polyzinc primer and two coats of hammer paint, all and anywhere else, needed, all works according to drawings, specifications, conditions and as directed by the Engineer or his representative.	NO	2.0		\$ -
6.4	<u>ALUMINUM WINDOWS:</u>				
6.4.1	Supply and install of (AL. W1) Aluminum Sliding window size 90x120 cm, colored powder coated profile 7000 AMBATIA section, 2 sliding leaves. The works include 6 mm Belgium clear glass, silicone sealant, ironmonger and hardware, all and anywhere else, needed, all according to drawings, specifications, conditions and as directed by the Engineer or his representative.	NO	15.0		\$ -
6.4.2	Ditto, (AL. W2) Aluminum Sliding window size 100x120 cm, colored powder coated profile 7000 AMBATIA section, 2 sliding leaves.	NO	4.0		\$ -
6.4.3	Ditto, (AL. W3) Aluminum fixed & tilted window size 80x60 cm, colored powder coated profile 4500, 1 tilting leaf.	NO	9.0		\$ -
6.4.4	Ditto, (AL. W4) Aluminum fixed & tilted window size 310x80 cm, colored powder coated profile 4500, 2 tilting leaves and 2 fixed leaves.	NO	6.0		\$ -

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
6.4.5	Ditto, (AL. W5) Aluminum fixed & tilted window size 60x130 cm, colored powder coated profile 4500, 1 tilting leaf.	NO	2.0		\$ -
6.4.6	Ditto, (AL. W6) Aluminum fixed & tilted window size 310x140 cm, colored powder coated profile 4500, 4 tilting leaves and 4 fixed leaves.	NO	6.0		\$ -
6.4.7	Ditto, (AL. W7) Aluminum fixed window size 310x150 cm, colored powder coated profile 2000 section 66/40 with with 10mm transparent triplex Gelatin Glass .	NO	3.0		\$ -
6.4.8	Supply and install of Aluminum & Alka Bond Cabinets for workers locker size 220x50 cm, with 4 shelves and 4 leaves of Anodized metallic profile. The works include 4 mm metallic Alka bond sheet, silicone sealant, ironmonger and hardware, all and anywhere else, needed, all according to drawings, specifications, conditions and as directed by the Engineer or his representative.	NO	2.0		\$ -
6.4.9	Supply and install of Aluminum & Alka Bond Cabinets for workers locker size 220x50 cm, with 4 shelves and 8 leaves (2 leaves for each shelf form double side) of Anodized metallic profile. The works include 4 mm metallic Alka bond sheet, silicone sealant, ironmonger and hardware, all and anywhere else, needed, all according to drawings, specifications, conditions and as directed by the Engineer or his representative.	NO	2.0		\$ -
6.5	<u>MISCELLANEOUS WORKS :</u>				
6.5.1	Supply and install Laminated Aluminum Handrail for Staircases 60-80 cm height. The scope of works includes joineries, accessories, connections, plates, all and anywhere else, needed, all according to drawings, specifications, conditions and directed instructions by the Engineer or his representative.	MR	5.5		\$ -

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
6.5.2	Supply and install of Building Main Signage Board with three line Arabic text: مجلس الخدمات المشترك إدارة النفايات الصلبة في محافظتي غزة والشمال size (340x120 cm) of 15 mm compacted Foam board sheets and 3 mm Black Alka bond sheets, All Cutted on CNC Machine and fixed on wall with hidden bolts. All according to drawings, specifications, conditions and as directed by the Engineer or his representative.	NO	1.0		\$ -
6.5.3	Supply and install of Joint Council LOGO Signage Board size (120x120 cm), of 15 mm compacted Foam board sheets and 3 mm Colored Alka bond sheets like Logo colors, All Cutted on CNC Machine and fixed on wall with hidden bolts. All according to drawings, specifications, conditions and as directed by the Engineer or his representative.	NO	1.0		\$ -
6.5.4	Sign For W.C, Light Blue 20x20 of 3 mm clear transparent PVC Sheet with <u>back stick</u> double face sticker cutted by cutter (one use for text Arabic/ English or Symbol and the other use as background). All according to drawings, specifications, conditions and as directed by the Engineer or his representative.	NO	5.0		\$ -
6.5.5	SG3: Spaces Sign , Light Blue 40x20 cm, ditto with space title text Arabic/ English and Space/ Floor Number.	NO	20.0		\$ -
6.5.6	Escape stairs Arrows Sign (Lift, Right), Light Blue 40x20 cm, ditto with Text (Stairs السلالم), Symbol of Stairs Egress and directional arrow.	NO	2.0		\$ -
6.5.7	Exit Escape Arrows Sign (Lift, Right), Light Blue 20x40 cm, ditto with Text (EXIT مخرج), Symbol of Exit Egress and directional arrow.	NO	5.0		\$ -
6.5.8	Escape Exits Sign , Light Blue 20x40 cm , ditto with Text (EXIT مخرج) and Symbol of Exit.	NO	2.0		\$ -

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
6.5.9	Fire hose reel Cabinet Arrows Sign (Lift, Right), Red 20x40 cm, ditto with Text (FIRE حريق), Symbol of Flame, Hose Reel , Extinguisher and directional arrow.	NO	2.0		\$ -
6.5.10	Employees Only Sign , Light Yellow and Black 20x40 cm, ditto with Text (Employees Only للعاملين فقط) and Symbol of Denied Warning.	NO	4.0		\$ -
6.5.11	Access Denied Sign , Light Yellow and Black 20x40 cm , ditto with Text (Access Denied ممنوع الدخول) and Symbol of No Access.	NO	8.0		\$ -
6.5.12	Floor egress plans Sign 80x40 cm, ditto with printed Plan for each floor.	NO	2.0		\$ -
6.6	<u>FURNISHING WORKS :</u>				
6.6.1	Supply Secretary Swivel chair with arm revolving with five wheels and high back size (W65-70xD50-55xH115-125 cm), -Adjustable up and down, able to shifting forward and backward with ability to lock. -Able to carry up to 185 kg. -Heavy duty and original alloyed Aluminum base with five wheels/ castors. -Chair Pole should be original and heavy duty. -Chair seat & back with wooden body upholstered with mesh fabric cover and 7-15 cm foam "industrial sponge high pressure 30-50". -the chair with PVC/Plastic adjustable arms. with all needed accessories and parts to complete work according to the tender documents and engineer instructions.	NO	4.0		\$ -

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
6.6.2	<p>Supply Manager Swivel chair with arm revolving with five wheels and high back size (W70-75xD55-60xH115-125 cm) high back,</p> <ul style="list-style-type: none"> -Adjustable up and down, able to shifting forward and backward with ability to lock. -Able to carry up to 185 kg. -Heavy duty and original alloyed Aluminum base with five wheels/ castors. -Chair Pole should be original and heavy duty. -Chair seat & back with wooden body upholstered with mesh fabric cover and 7-15 cm foam "industrial sponge high pressure 30-50". -the chair with PVC/Plastic adjustable arms. <p>with all needed accessories and parts to complete work according to the tender documents and engineer instructions.</p>	NO	1.0		\$ -
6.6.3	<p>Supply Waiting four legs Chair with arms size (W 50-55xD 55-60, H with back 70-75cm).</p> <ul style="list-style-type: none"> - Able to carry up to 185 kg. - Heavy Duty Stainless steel four legs and 2 arms made of profile pipe 22-25 mm and 1.25-2 mm thickness with continuous welding and PVC leg end cap. - The chair backing billow of wood upholstered 4-5 cm foam "industrial sponge high pressure 30-50" covered with leather, plastic covering to rear back. - The chair sitting mattress of wood upholstered 5-7 cm foam "industrial sponge high pressure 30-50" covered with leather, plastic covering to rear back. - 2 seat arms welded with steal structure covered with ABS plastic. <p>with all needed accessories and parts to complete work according to the tender documents and engineer instructions.</p>	NO	4.0		\$ -

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
6.6.4	<p>Supply Wooden Filing cabinet with Glass leaves size 80X40X195 cm.</p> <ul style="list-style-type: none"> - Made of 17 mm sandwich wood with beech veneer for cabinet sides and Shelves with beech wood edges. - Upper cabinet with 3 wooden shelves including divider base, Lower Cabinet with 2 shelves including cabinet base. - Upper cabinet with 2 leaves 17 mm HDF wood painted powder coating paint (Blakasheer), with 6 mm glass . - Lower cabinet with 2 leaves 17 mm HDF wood painted powder coating paint (Blakasheer). - The rear back of 0.8 mm Ablcag wood with beech veneer layer. - All internal and external faces with beech veneer except leaves or other mentioned. - stainless steel handle and locks. - 6 mm clear transparent Glass. <p>with all needed accessories and parts to complete work according to the tender documents and engineer instructions.</p>	NO	2.0		\$ -
6.6.5	<p>Supply Standard Wooden Desk size 160X80X75 cm.</p> <ul style="list-style-type: none"> - Made of 17 mm sandwich wood with beech veneer with beech wood edges. - Deck counter top of 20 mm sandwich wood with beech veneer, and with 3x5 beach wood edges including 5 cm width of 17 mm sandwich wood under counter hidden support. - Desk sides of 17 mm sandwich wood with double edges covered with 3.5x3 beech wood edges. - Desk Frontal face of 17 mm MDF wood painted powder coating paint (Blakasheer). - Fixed 4 Drawers Unit of 17 mm sandwich wood with drawer face 17 mm MDF wood wood painted powder coating paint (Blakasheer). <p>Fixed Cabinet with leaf and internal shelf, like drawer finish.</p> <ul style="list-style-type: none"> - stainless steel handle and locks. <p>with all needed accessories and parts to complete work according to the tender documents and engineer instructions.</p>	NO	2.0		\$ -

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
6.6.6	<p>ditto, Manager Wooden Desk</p> <ul style="list-style-type: none"> - With Meeting (T) Table size 280x80x75 cm of 17 mm sandwich wood with beech veneer and double sides covered by beech wood and beech wood for top counter edges. - with side cabinet size 160x60x60 cm of 17 mm sandwich wood with beech veneer for top and sides divided to 2 cabinets with 4 leaves and 2 shelves including bottom base, leaves of 17 mm MDF wood painted powder coating paint (Blakasheer). <p>with all needed accessories and parts to complete work according to the tender documents and engineer instructions.</p>	NO	1.0		\$ -
6.6.7	<p>Supply and fix Wooden Counter Desk size 240X80X75- 110 cm.</p> <ul style="list-style-type: none"> - Made of 17 mm sandwich wood with beech veneer with beech wood edges. - Deck counter top of 20 mm sandwich wood with beech veneer, and with 3x5 beach wood edges including 5 cm width of 17 mm sandwich wood under counter hidden support. - Desk sides of 17 mm sandwich wood with double edges covered with 3.5x3 beech wood edges. - Desk Frontal face of 17 mm MDF wood painted powder coating paint (Blakasheer). - Top Counter size 40x161x35 cm of 20 mm sandwich wood with beech veneer with vertical divider. - 1 Fixed 4 Drawers Unit of 17 mm sandwich wood with drawer face 17 mm MDF wood wood painted powder coating paint (Blakasheer). - stainless steel handle and locks. <p>with all needed accessories and parts to complete work according to the tender documents and engineer instructions.</p>	NO	1.0		\$ -

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
6.6.8	Supply Automatic Washing Machine, LG, Sharp, Samsung or equivalent • Color: Metallic • Top loading • Single tub with multi-programs / functions • Capacity: 10 KG • Drum material: Stainless steel • Max. Spindle speed: 1000 - 1400 rpm • Wheeled Mobile stainless steel base • Power Supply: 230 VAC, 50Hz • Energy Efficient A++ • Inverter/ Smart • Warranty: 1 year	NO	1.0		\$ -
6.6.9	Supply Automatic Drying Machine, LG, Sharp, Samsung or equivalent • Compact Electric Condensing • Color: Metallic • Front loading • Single tub with multi-programs / functions • Capacity: 9 KG • Drum material: Stainless steel • Wheeled Mobile stainless steel base • Power Supply: 230 VAC, 50Hz • Energy Efficient A++ • Inverter/ Smart • Warranty: 1 year	NO	1.0		\$ -
<u>TOTAL OF BILL 06 - WOODEN, ALUMINUM & METAL WORKS</u>					-
<u>MOVE TOTAL TO SUMMARY</u>					

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
BILL 07 - INSULATION WORKS					
<i>- All the following items shall be completed according to drawings, specifications, conditions and as directed by the Engineer or his representative.</i>					
7.1	Supply and install granular top surface 4mm thick bituminous sheet for roof water proofing. The price shall include supplying, installing, workmanship, prime coat, overlapping and water testing for the roof after completing the works and making good with all required works. The works also include water testing for wetted area after completing the works. The measurement will be on the horizontal Plan only. All works according to drawings, specifications, conditions and as directed by the Engineer or his representative.	M ²	450.0		\$ -
<u>TOTAL OF BILL 07 - INSULATION WORKS</u>					-
<u>MOVE TOTAL TO SUMMARY</u>					

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
BILL 08 - SITE WORKS					
8.1- EARTH WORKS					
	<i>Quantities of excavation shall be measured according to the plain concrete footing plan multiplied by the average excavation depth. Quantities of the Backfilling shall be measured according to excavation quantity subtract the elements mentioned in the drawings.</i>				
	<i>Back-filling item should be in layers (25cm max. each & compaction test 98%). Prices shall includes supplying, wetting, compacting, transporting, testing and any works else needed, all according to drawings, specifications, conditions and directed instructions by the Engineer or his representative.</i>				
	<i>Suitable Excavated Clean sand or kurkar soil material (excavated only from the project site boundaries) should be used for back-filling in layers (25cm max. each & compaction test 98%), selected from the approval excavated soil or imported.</i>				
8.1.1	Excavation from natural ground level up to the required design level of boundary wall foundations and septic tank. The works include compacting the natural soil surfaces under footings to (98% of MDD) and removing any debris outside the site to an approved dumping area, all works according to Engineer's instructions and specifications.	M ³	200.0		\$ -
8.1.2	Backfilling at areas shown on the drawings for boundary wall foundations by using Approved Excavated Material from the site, include supply, spreading, leveling, watering and compaction in layers not exceed 25 cm for each layer. (compaction test to 98% of MDD). All works according to drawings, specifications and engineer's instructions.	M ³	20.0		\$ -
8.1.3	Ditto, but backfilling using imported Kurkar from outside the site with all required works.	M ³	300.0		\$ -
8.2- CONCRETE WORKS					
	<i>Prices of all concrete items shall include shuttering, formwork, scaffolding, labour, supports, tie rods, spacers, steel reinforcement with shaping and fixing, testing of reinforcement steel, cement and concrete, supply and placing of concrete, Mix Design, vibrating, curing, painting of the external surfaces of underground concrete with (one coat of primer & min. 2-coats of hot bitumen - 75/25), gauge 250 polyethylene sheets for concrete casted on soil, workmanship, trowelling, ducts, sleeves, opening areas, etc.</i>				
	<i>The contractor has to submit shop drawings for engineer's approval before starting any works.</i>				
	<i>The contractor shall provide, erect and maintain all safety measures requirements according to specifications, local laws and engineer's instructions.</i>				

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
	<i>Any design faults and discrepancies must be reported to the engineer and any design corrections shall be incorporated in the prices.</i>				
8.2.1	Supply and cast ready mix reinforced concrete (B-250) for Foundations of Boundary wall, generator and water storage tanks with all required works, include polyethylene sheets with 250 micron thickness, according to drawings, specifications and engineer's instructions.	M ³	12.0		\$ -
8.2.2	Ditto, But R.C. (B-250) for Boundary Wall Ground Beams, Top Beams, Column Necks and Columns with all required works.	M ³	40.0		\$ -
8.2.3	Supply and cast ready mix reinforced concrete (B-300) for Septic Tank foundation, walls and slab with all required works. The price includes water stop, cast iron steps, painting the internal surfaces with a suitable insulation material, water testing, workmanship and any works else needed. All works shall done according to drawings, specifications, conditions and direct instructions by the Engineer or his representative.	M ³	45.0		\$ -
8.3- BLOCK, PLASTERING & PAINTING WORKS					
	<i>Prices of block works shall include supply of all materials, testing, mortar, scaffolds, placing of approval blocks, workmanship, all ducts, sleeves, opening areas, protection concrete (B-200) around sleeves and pipes (for electrical, sanitary & mechanical), concrete posts between columns and walls, reinforced concrete sills and lintels, tools and anything else, needed, all according to drawings, specifications, conditions and directed instructions by the Engineer or his representative.</i>				
	<i>Prices of plastering works shall include supply of all materials, galvanized angles (for exposed edges), galvanized mesh (between block wall and concrete), mixing, scaffolds, curing, workmanship & tools and anything else, needed, all according to drawings, specifications, conditions and directed instructions by the Engineer or his representative.</i>				
	<i>Prices of painting works for walls & ceilings (Paint of European Type of good quality) shall include supply of all materials, scaffolds, workmanship & tools and anything else, needed, all according to drawings, specifications, conditions and directed instructions by the Engineer or his representative.</i>				
8.3.1	Supply and build concrete hollow blocks for walls (size 40x20x20cm) with all required works, according to specifications and engineer's instructions.	M ²	320.0		\$ -

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
8.3.2	Supply and make External Plastering of three layers with min. thickness of 20mm. The first layer is rough nail rendering (mix 1:1 cement to sand), the second is 5mm thick mortar (mix 1:2 cement to sand) and the third is 13 mm undercoat (mix 1:3:0.25 cement to sand to lime) with all required works according to drawings, specifications and engineer's instructions.	M ²	820.0		\$ -
8.3.3	Supply and make ECAS (Italian finish) layer with all required works and according to specifications and engineer instructions.	M ²	820.0		\$ -
8.4- TILING & CURBSTONE WORKS					
<i>Prices of Tiles & Marble works shall include supply of all materials, testing, mortar, 5cm sand under tiles or marble or back the tiles or marble (wall), skirting, workmanship, opening areas and all materials & tools and anything else, needed, all according to drawings, specifications, conditions and directed instructions by the Engineer or his representative.</i>					
8.4.1	Supply and install I shaped Colored Interlock Tiles 8cm thick (B-450) for the site with 1cm thick basalt layer. The price includes excavation to the required level, backfilling, levelling and compaction of the subgrade. It also includes supplying and laying a new 25cm thick basecourse in two layers with watering and compaction to CBR>80% and MDD 100%.The price also includes supplying and laying 5cm thick of clean dune sand under the tiles. It also includes supply and casting reinforced concrete beams (B250) at the ends and edges of tiles and anywhere else needed (20x30cm with 2T12mm top and bottom reinf. and T8mm stirrups), all according to drawings, specifications and engineer instructions. The tests cost of all materials is included in the price.	M ²	730.0		\$ -
8.4.2	Ditto, but Colored Interlock Tiles 6cm thick for sidewalks with 20cm compacted Kurkar layer and all required works.	M ²	120.0		\$ -

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
8.4.3	Supply and build of Curbstone size (30 × 17 × 100) cm Precast concrete B300 for the sidewalks. The item includes supply, spread and compaction of 15cm thick and 50cm wide basecourse layer under the curbstone. The item also includes supply and cast of reinforced concrete B250 section 33 × 15 cm under curbstone and section 15 × 16 cm behind the curbstone, and the work includes filling of the blanks with concrete mortar and cleaning, the work includes supply and paint the curbstone a preparatory face and 2 layers with the required approved roads color with glass powder, the work includes the development of expansion joints every 12 meters filled with Kalkal and Mastic and all needed works to complete the job according to the specification and instruction of engineer or his representative.	M.R	160.0		\$ -
8.5- METAL WORKS					
	<i>All items shall be completed according to drawings, specifications, conditions and directed instructions by the Engineer or his representative.</i>				
	<i>Price of Galvanized Steel works include supplying, workmanship, oil painting (base coat & min. 2-coats of oil painting), fixation, hinges, , handles and all necessary parts needed to complete the works.</i>				
	<i>Price of doors, windows or other metal works, includes supplying, workmanship, fixation for lock type is UNION of good quality complete and all necessary parts needed to complete the works.</i>				
8.5.1	Supply and install Stainless Steel Ladder (316L) for the Septic Tank fabricated from 40mm and 20mm stainless steel pipes including fixation, stainless steel anchors and all required works according to drawings, specifications and engineer's instructions.	M.R.	5		\$ -
8.5.2	Supply and install 2mm Stainless Steel Cover size 1.00x1.00m for the Septic Tank including all required works according to drawings, specifications and engineer's instructions.	No.	2		\$ -
8.5.3	Supply and install Galvanized Steel Sliding Manual Main Gate - 5.00 x 2.30 including electrical motor, control panel, frame, painting with one coat of polyzinc primer and two coats of hammer paint, R.C. beam and all required works according to drawings, specifications and engineer's instructions.	No.	2		\$ -

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
8.5.4	Supply, install and paint a two leaves Galvanized Steel Gate with size of 2.0 x 2.30m. The door made of 2mm thick galvanized steel sheets and 80x40x3mm galvanized steel profiles. The item includes 3mm steel frame, hinges, handle, lockers, painting with one coat of polyzinc primer and two coats of hammer paint, and all parts needed to complete the work according to drawings and engineer's instructions.	No.	1		\$ -
<u>TOTAL OF BILL 08 - SITE WORKS</u>					-
<u>MOVE TOTAL TO SUMMARY</u>					

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
BILL 09 - MECHANICAL WORKS					
9.1 - WATER, PLUMBING AND FIRE					
*	Notes:				
	- <i>The Contractor shall when pricing this Bill take into consideration, include and allow for costs or expenses of all requirements stipulated in the section entitled "General Items" preceding this Bill.</i>				
	- <i>The exact lengths of the required pipes, the exact number of the required valves and the exact quantities of concrete will be determined during the implementation of the Works.</i>				
	- <i>Price should include all excavation, backfilling, supporting of trenches and all associated works.</i>				
PLUMBING FIXTURES					-
<i>(Note: all Plumbing Fixture's are subject to arch. and interior design engineer approval)</i>					-
1	Supply, install, test and commission Vitreous China wash basin (50x40cm), VITRA First Class or Equivalent, completed with chrome plated mixer (Turkish Made or equivalent), bottle trap, soap tray, chrome plated angle valves, flexible tubes, wall fixed mirror 60x60 cm and all accessories, supports and hangers.	No.	2		-
2	Supply, and install Vitreous China, European type W.C. VITRA First Class, completed with 2.5 Gallon flush reservoir, roll holder, chrome plated angle valves and flexible connections, supports, hand spray with flexible chrome connection and all necessary fitting, heavy duty cover, rubber connector on WC outlet to the drain pipes.	No.	4		-
3	Supply, install & test vitreous china shower tray First Class (70x70 cm), complete with chrome mixer Turkish Made or equivalent), towel holder, floor trap, angle valves and all related works, with all necessary supports and fixing as per specifications, drawings, international standards and Engineer satisfaction.	No.	1		-

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
4	Supply and install Stainless steel single bowl sink for kitchen (59x50x18) cm, completed with chrome plated sink mixer Turkish Made or equivalent) including all necessary fittings and connections, angle valves, chrome plated chain and rubber plug, with all necessary supports and fixing.	No.	2		-
5	Supply, lift to position, install and test; hidden in walls, buried in soil, under tiles, exposed, suspended or in shafts, Siksik or Kholyot UPVC pipes, complete with all required and necessary Kholyot or European made (Rubber rings, Tees, Elbows, Y type Tees, Vent Caps, Mesh for rain pipes ...), price shall include all related works (excavating, backfilling with fine sand, covering with concrete layer ...) as per specifications, drawings, international standards, local regulations and engineer satisfaction.				-
5.1	4" Dia. UPVC pipes.	LM	150		-
5.2	6" Dia. SN8 UPVC pipes.	LM	80		-
6	Supply and install floor cleanout sealed type and floor drain (20*20) as per specification and according to the DIN or EN standard. The floor cleanout shall be provided with adjustable head and concealed complete with Stainless Steel Cover and the floor drain shall be provided with an adjustable head, chrome plated strainer and concealed chrome plated cover. The price shall include all 2" pipes needed to connect the fixtures (Laboratory, shower, bathtub,etc.).				-
6.1	*. F.D. 4" Dia. with S-type UPVC trap.	No.	6		-
6.2	*. F.C.O 4" Dia.	No.	10		-
6.3	*. Rain water Drain R.W.D 4"-with Mesh-	No.	7		-

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
7	Supply, install and test, Rectangular 30X30 cm PVC gully trap with meshed Stainless steel 30X30mm cover complete with all needed concrete encasement 10 cm. Price shall include connections to the nearest pipe drain or manhole and required works as per specifications, drawings, international standards, local regulations and engineer satisfaction.	No.	5		-
8	Supply and install rectangular precast reinforced concrete class B300 2-unit gully set (the gully with external dimensions 1.0x0.6x0.65m), cast iron grills with frame (25 tons max. load). Price includes internal and external coating, benching, connections, 6" S-trap, excavation and backfilling with clean sand and compaction and all required works to complete the job as in drawings, specifications and according to Engineer instructions.	No.	1		-
9	Supply, install and test; sewage manholes with min. depth of 100cm, complete with cast iron cover and cover ring. Price shall include but not limited to; excavating, backfilling with fine sand, compaction, external insulation, pipe connection, manhole internal finish (lebood) and all related works as per specifications, drawings, international standards, local regulations and engineer satisfaction.				-
9.1	80 cm Dia. (25 tons cast iron cover)	No.	9		-
9.2	100 cm Dia. (25 tons cast iron cover)	No.	1		-
DOMESTIC COLD AND HOT WATER SYSTEM					-
10	Supply& install PPR pipes and fittings as per specification and according to the DIN or EN standards. All pipes and fittings sizes shall be PN20 and withstand temperature up to 90°C. The outdoor pipes must be treated against the ultra-voilet rays and should be insulated with vedoflex and cladding with 0.04mm aluminum foil sheets, the item shall include hanger, sleeves, supports, isolating valves and adaptors as per specifications, drawings, international standards, local regulations and engineer satisfaction. The water pipes must be thermally isolated. <u>Every branch pipe must be installed with valve.</u>				-

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
10.1	Diam.50mm.	LM	50		-
10.2	Diam.40mm.	LM	10		-
10.3	Diam.32mm.	LM	10		-
10.4	Diam.25mm.	LM	10		-
11	Supply, lift to position, install and test; hidden in walls, buried in concrete, buried in soil, under tile, exposed, suspended or in shafts, 2" HDPE pipes, complete with all required and necessary (Tees, Elbows, Y type Tees, Valves, connection to the existing well and connection to the ground tanks ...), price shall include all related works (excavating, filling with fine sand, covering with concrete layer where needed ...) as per specifications, drawings, international standards, local regulations and engineer satisfaction.	LM	100		-
12	Supply and install water distribution box (W.D.B.) Box Frame Material: Granite (Rossabita 2cm) and aluminum doors with frame and with switch key. The size of W.D.B. is to fit the No. of outlets and other components + 20 % spare space. Box Components: Including all needed accessories and fittings, complete with all associated water supply pipework from hot and cold water tanks. Including PE-X pipes 16mm outer diameter and 2.2mm wall thick with flexible polyethylene corrugated conduit of 25mm outer diameter and 20mm inside diameter and also includes the HDPE pipes from the riser to the box. The price shall be deemed to include all distribution manifolds, copper headers (NTM Italy type or equivalent), valves on cold and hot water manifolds, air release valves, suitable fixing brackets, all and all required accessories. All works according to drawings, specifications, conditions and as directed by the Engineer or his	No.	2		-
13	Supply, install, purge, test and commission, 5000 Liters plastic cold water tanks complete with 20cm concrete base, water level indicator, float valves, float switches, gate valves, lockable cover, air vents. Price include reinforced concrete foundations B250, painting all tanks with white color as per specifications, drawings, international standards, local regulations and engineer satisfaction.	No.	8		-

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
14	Supply, install, test and Commission solar collector System consist of 200 liters hot water storage tank, Internal ceramic coated, external insulation, cladding, electrical heater 2.5 kw, two mirror size 220cmX135cm with 11 internal copper pipes. Price to include concrete blocks, AAV, galvanized steel angles 5*5*0.5 cm and all fittings, supports, connections to hot and cold water pipes all as per drawings, specifications, and engineer satisfaction.	No.	1		-
15	Supply, install, test and Commission 5 stage Reverse Osmosis (R.O) unit , Packaged Unit , with capacity of (150Liter/day) , the price shall include water tank 12 liter Tap pumps & network including all necessary fittings and connections, angle valves, chrome plated chain and rubber plug, with all necessary supports a and fixing. all as per drawings, specifications, and engineer satisfaction.	No.	1		-
16	Supply and install electromagnetic Dosing Pump suitable for Chlorine with. 1.6 L/hr at 16 bar working pressure, complete with any injection valves, tubing, pipes AND SLEEVE TO THE MH6 , 200L PE white tank and accessories. Price include calibrating the dosing pump to the proper flow rate to insure the injection material rate and including providing 200 liters of Hypochlorite solution for disinfection . <u>The pump should operate when the high pressure pumps are used. All needed work and material must be included in the price.</u>	No.	1		-
DOMESTIC AND DISINFECTION WATER PUMPS					-
17	Approve, supply, install, test and commission, U.S. or European made cold water pumps set consists of \ pumps\ with stainless steel impellers 316L (RPM < 1450) IP65 complete with pressure vessels (Expansion tank size to be calculated), concrete bases, supports, valves, strainers, check valves, flexible connections, pressure gauges, fittings, float switches, pressure switches, control and power panel as per specifications, drawings, international standards, local regulations and engineer satisfaction.				-
17.1	Vol. flow rate: 20 m3/hr @ 2 bar pump efficiency not less than 67% from the ground tanks to the elevated tanks.	unit	1		-

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
17.2	Vol. flow rate: 3 m3/hr @ 2 bar pump efficiency not less than 67% from the elevated tanks to the buildings fixtures with all needed control (Operate when the pressure drop). The price also includes steel shed to cover the pump from rain and sunlight and bypass Manifold.	unit	1		-
18	Supply and install a water meter Dim.2" ARAD type, completed with all necessary valves strainer, non return valves, unions, fittings and hot galvanised shield box as approved by the Water Authority.	No.	1		-
19	Approve, supply, install, test and commission, U.S. or European made High pressure water pumps max. 200 bar, 25 L/min set consists of two pumps one in operation and the other stand by with stainless INOX 316 L stainless steel for all internal metal parts coming into contact with water (RPM < 1450), 13.1 HP, special seals can be used with aggressive chemicals and salt water., complete with concrete bases, supports, valves, strainers, check valves, its flexible Hose , pressure gauges, fittings, float switches, pressure switches, control and power panel as per specifications, drawings, international standards, local regulations and engineer satisfaction. - The price includes Two X 1000 Liter polyethylene PE white chlorination tank with built in factory made manual PVC mixer in addition to motorized PVC mixer. The works and installations should include for all associated adjustable-Spray Gun-, fittings and accessories required to accommodate the work.	Set.	1		-
20	Supply, install, test and commission, 1/2" High pressure Flexible Hose 200 bar, complete with, supports, valves, fittings, as per specifications, drawings, international standards, and engineer satisfaction.	LM	70		-
FIRE FIGHTINGS PUMPS & NETWORKS					-

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
21	Supply, install, test and commission, U.S. or European made fire fighting pumps set consists of one booster pump with all needed components, control and connections and jockey pump (RPM < 2900), complete with B250 concrete bases, supports, valves, strainers, check valves, expansion tanks (Size to be calculated) flexible connections, pressure gauges, fittings, float switches, pressure switches, control and power panel, cables, and connection to electrical panel, water proof maintenance isolator switch as per specifications, drawings, international standards, NFPA Codes, Civil Defense Dep. & local regulations and engineer satisfaction.				
21.1	Booster Pump: 7m ³ /hr @ 5 bars Each Jockey Pump: 2m ³ /hr @ 5.5 bars.	Set.	1		-
22	Supply, install, test and commission, Diam. 50mm SCHD 40 Seamless black steel pipes complete with all fittings, accessories, supports, valves & pressure reducing valves (where necessary). Price shall include painting of two layers Zink content primary paint and one layer of oily red colored finishing paint as per specifications, drawings, international standards, NFPA Codes, Civil Defense Dep. & local regulations and engineer satisfaction.	LM	70		-
23	Supply and install Complete made of SS 316 with lock Fire hose reel cabinet (80x80x25)cm 2mm thickness, in the wall with rubber hose (15bar) pressure, 30m length, 25mm Dia., angle globe valve 1.5", Jet nozzle with all necessary pipes, connections and fittings and anywhere else, needed, all according to drawings, Pressure reducing valve (where necessary), The price includes supplying one 6kg powder fire ext. and one 5 kg CO ₂ fire ext. for each one, all fittings, accessories and supports as per specifications, drawings, international standards, local regulations and engineer satisfaction.	No.	2		-
24	Supply, install, 5kg type CO ₂ fire Extinguisher, complete with supports as per specifications, drawings, international standards, local regulations and engineer satisfaction.	No.	3		-

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
25	Supply, install, 6kg type Powder fire Extinguisher, complete with supports as per specifications, drawings, international standards, local regulations and engineer satisfaction.	No.	3		-
26	Supply and install Automatic (Halotron Agent) hanged Fire extinguisher (6kg) with thermal hose to every component in the panel. The item includes all accessories, fittings and all required works to complete the job.	No.	2		-
26.1	Ditto, but 3kg.	No.	1		-
SUB-TOTAL OF WATER, PLUMBING, FIRE- US\$					-
9.2- HVAC AND VENTILATION WORKS					
	GENERAL NOTES:-				
	1. Price shall include all required and necessary condensate pipe (Diam. 50mm UPVC) from the Unit to UPVC Pipe Dia. 50mm and connection to nearest drain point.				
	3. Price shall include all necessary and required signal and power connections.				
	7. All copper pipes welding works shall be done by the aid of nitrogen gas and under the supervision of the consulting engineer.				
	8. Price shall include all restoration of any damage or demolishing during installation.				
	9. All copper pipes shall be thermally insulated, wrapped in different colors for different groups.				
	10. Works includes all required sleeves, hangers, supports, bases, for both indoor and outdoor units as per engineer approval and manufacturer recommendation.				
27	Split Units Supply, Install, test and commission Split A/C wall mounted unit inverter type complete with indoors and outdoor unit (R410), Hitachi, Copeland, Danfoss or equivalent compressor refrigeration pipe till 8 meters, the copper pipes should be type L according to standard ASTM B819, Diam 2" UPVC condensate pipes to connect it to the nearest Drain Pipe all necessary accessories as described in specifications and drawings Type Electra, LG, or equivalent				
27.1	1.5 TR Cooling Capacity (18000BTU @ 525cfm)	No.	2		0
27.2	Ditto, but 1 TR Cooling Capacity (12000BTU)	No.	1		0

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
6	VENTILATION WORKS (EXTRACT FANS) AND ACCESSORIES:				
	Supply, left to position, install and operate inline exhaust/fresh air fans including all required and necessary, Cables, Power and control panels, power cables, supports, fittings, flexible connections and controllers.				
28	50 CFm @ 50 psi.	No.	3		-
SUB-TOTAL FOR HVAC, FUEL AND VENTILATION WORKS					-
TOTAL OF BILL 09 - MECHANICAL WORKS					-
<u>MOVE TOTAL TO SUMMARY</u>					

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
BILL 10 - ELECTRICAL WORKS					
	* Notes:				
	- Supplying, installing, testing and commission of the electrical works as per drawings, specifications, and engineer's instructions. The prices of the following items include all necessary junction boxes, wires, conduits, clamps, bolts, connectors and connecting all cables to switch boards. The price includes all required Reinforced concrete works B250 to all items in this Bill.				
	- All installation shall be in accordance with :				
	- The drawings , specifications and instructions and demands of the engineer.				
	- The electricity law and electrical code requirements of the BRITISH standards.				
	- The contractor should refer to the drawings , specifications and other Contract Documents .				
	- The prices will be deemed to include for the full cost as described in all Documents.				
Section 1 : Electrical Wiring					
A-	Supply, install and commissioning switches including switch box, colored rigid Fire resistant pvc conduits, 3x 1.5mm ² n2xy cables ,s.s terminal boxes and all connection between the appropriate lighting point to the terminal point as detailed on drawings. The price shall include all other required accessories, material and/or works that may be needed to make the system functional acc. To drawings, general specifications and all other relevant prevailing engineering standards for the successful completion of the work to the satisfaction of the engineer. All works and materials shall be approved by the engineer prior to placing orders.				
	The following type of switches shall be included:				
1	One gang - one way 10A, 250V white color switch. Type GIWISS CHORUS or approved equivalent.	No.	11		-
2	Ditto, but Waterproof IP55	No.	16		-
3	Two gang - one way 10A, 250V white color switch. Type GIWISS CHORUS or approved equivalent.	No.	2		-
4	Ditto, but Waterproof IP55	No.	3		-

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
5	Three gang - one way 10A, 250V white color switch. Type Bticino Made in Italy.	No.	2		-
6	Ditto, but Waterproof IP55	No.	1		-
7	One gang - two way 10A, 250V white color switch. Type Bticino Made in Italy.	No.	5		-
8	Ditto, but Waterproof IP55	No.	16		-
9	Stair case push button with luminous, 10A, 250V switch. Type Bticino Made in Italy.	No.	4		-
B.	Supply, install and commissioning socket outlets including all boxes, Colored rigid Fire resistant pvc conduits/ trucking, cables 3x2.5mm ² n2xy, terminal boxes and all connection between the appropriate distribution board to the terminal point as detailed on drawings. The price shall include all other required accessories, material and/or works that may be needed to make the system functional acc. To drawings, general specifications and all other relevant prevailing engineering standards for the successful completion of the work to the satisfaction of the engineer. All works and materials shall be approved by the engineer prior to placing orders.				-
	The following type of sockets shall be included:				-
1	Single socket outlet 3pin with safety shutters, 250V ,10/16A. Type Bticino Made in Italy.	No.	1		-
2	Ditto, but single socket with water proof cover.	No.	45		-
3	Ditto as (1), but double socket outlets.	No.	43		-
4	Ditto as (1) , but 20A for AC units and water heater with switch and luminous.	No.	9		-
5	3ph socket with switch, 5x32A,water proof IP 44 for washing machines, dryers, X-ray, act. Price include IP 44 box and all accessories complete with male. Type GEWISS Made in Italy.	No.	1		-

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
	<u>Section2 : Cables</u>				-
	Supply, install and Testing the following power cables as per standards and drawings including rigid pvc pipes, connecting cable from sources to destinations, labeling, fixing of the cables in the trenches, cable lugs, cable glands, brackets, fitting clamps, shoes, and all other relevant materials and accessories. The price shall include the cables with required accessories, material and/or works that may be needed to make the system functional acc. To drawings, general specifications and all other relevant prevailing engineering standards for the successful completion of the work to the satisfaction of the engineer. Type synergy or approved equivalent type.				-
	The following type of cable sizes shall be included:				-
1	XLPE cable (3x120+70)+E(70) mm2 from Transformer and generators to MDB	LM	80		-
2	XLPE cable (3x70+35) +E(35)mm2 from MDB to microwave system main feeder.	LM	25		-
3	Ditto, but 5x6mm2.	L.M	30		-
4	Ditto, but 5x2.5mm2.	L.M	5		-
5	Ditto, but 3x4mm2.	L.M	10		-
6	Ditto, but 3x1.5mm2.	L.M	15		-
	<u>Section 3: Distribution Boards</u>				-
	Supply, install & commissioning panel board wired and tested in accordance with international British Standards, including 2mm hot galvanized steel frame IP55, with anti-static paint (As per EATON TYPE TESTED Boards or approved equivalent type) painted with anti-rust insulating paint, factory assembled, wired & tested in accordance to approved international testing procedure.				-

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
	The panel shall be equipped with 3 phases,N,E bus bars made of annealed copper of adequate sizes and short circuit capacity. The price shall also includes MCB'S , MCCB'S, ELCB'S , indication lamps, earthing terminal, step rotary switches ,emergency stop, pushbuttons , signal lamps, flexible wires, conduits, terminals, fuses , and handing over clean, tested and in operating conditions, ammeters, voltmeters, switches , DMMs, termination of cables,Numbering,Labelling, steel pocket on door for as built drawings and testing, handing over in operable conditions The size shall accommodate all the internal fittings plus 30% space for future use and not less than 60x40x20cm. all according to drawings and engineers instructions.				
1	Main Distribution Board MDB	Ls.	1		-
2	MTS and ATS system	Ls.	1		-
3	Power factor correction system	Ls.	1		-
4	Panel board DB-FF	No.	1		-
5	Panel board DB-GF	No.	1		-
6	Panel board DB-UV	No.	1		-
7	Panel board DB-ExL	No.	1		-
8	Supply, install, test and run a digital bidirectional power meter with integrated LCD display, smart type with class 0.2s, network connection, complete with CTs, cables, wires, circuit breakers, timers, relays, hot galvanized steel 2mm cabinet, GEDCO fees. All works and materials shall be according to GEDCO specifications and engineer instructions.	L.S	1		-
9	Supply, install, test and run 250KVA transformer, low losses, complete with all required materials according to GEDCO standard and instructions. The item include 300A 3-phase subscription fees, all works must be done with full coordination with GEDCO, and supervisor engineer. The price include the fees for GEDCO study.	L.S	1		-

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
	Section 4: Lighting System:				-
	Supply, install and test lighting outlets and lighting fixtures as per drawings, the Lighting outlets includes colored rigid Fire resistant pvc conduits 20mm dia., pull box, cables 3x1.5mm ² , switch boxes, fixing screws, ceiling rose from appropriate distribution board to lighting point internal and/or external as specified and detailed on drawings. All pvc conduits, trucking should be inflammable type. and Lighting fixture includes lamps, starters, supports, connection, clamps, conduits, wires and/or cables of not less than 3x1.5mm ² , and all accessories to complete systems. The price shall also include all required other accessories, material and/or works that may be needed to make the system functional acc. to the drawings, general specs and all other relevant prevailing engineering standards for the successful completion of work to the satisfaction of the engineer. All works and materials shall be approved by the engineer prior to placing orders. Type				-
	The Lighting fixture types shall include the followings:				-
1	Recessed/ceiling mounted spot LED light 7" dia. With LED lamp 18W,220VAC. Type Matix or equivalent.	No.	16		-
2	Ditto, but Waterproof min. IP44 for Bathrooms	No.	21		-
3	Surface LED lighting fixture, 120cm with LED lamp 32W,220VAC. Type Matix or equivalent.	No.	31		-
4	Ditto, put waterproof min. IP44	No.	45		-
5	Surface Light ceiling or wall mounted 120cm,220V AC with UV tube light.	No.	37		-
6	Surface Light ceiling or wall mounted 60cm,220V AC with UV tube light.	No.	4		-
7	Outdoor Flood LED Light fixture with LED lamp 200W ,220V AC,IP 65.	No.	18		-
8	" EXIT" sign 8 watt with back up battery 90min. And labels in both English / Arabic languages for ceiling mounted	No.	10		-

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
9	" EXIT" sign 8 watt with back up battery 90min. And labels in both English / Arabic languages for ceiling mounted and with direction signs	No.	5		-
	<u>Section 5: Low Voltage Installations</u>				-
	Supply, install, test and commissioning the following systems including colored rigid Fire resistant pvc conduits, junction and pull boxes and all accessories in accordance to the drawing, technical specifications and code of practice. The price shall include the outlet (fitting) and all other required accessories, material and/or works that may be needed to make the system functional acc. To the drawings, general specifications and all other relevant prevailing engineering standards for the successful completion of the work to the satisfaction of the engineer. All works and materials shall be approved by the engineer prior to placing orders.				-
1	i-Computer network:-				-
1.1	Data Socket outlet 8 pin RJ 45 including data cable 10-Gigabit Ethernet Cat7 S/FTP (Refer to data cable item and specifications) from computer socket outlet to Patch Panel. Type Gewiss original Made in Italy.	No.	20		-
1.2	19" steel rack, with glass cover and lock ,Brand Name IDF Rack ,Dimensions (width/depth) : 600x600 mm, Sides : steel , removal side panels ,Equipment :2x of fan in roof cooling panel; 1x of power strip , 8 node. Include : Patch Panels with cat 6 Female.	No.	2		-

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
1.3	<p>Supply, install, test and operate an 16 port PoE Gigabit Switch with SFP</p> <ul style="list-style-type: none"> • 24 Gigabit RJ45 Ports • Min, 2 SFP Ports • Non-Blocking Throughput: 10 Gbps • Switching Capacity: 20 Gbps • Min. Forwarding Rate: 14.88 Mpps • Maximum Power Consumption: 250W • Supports PoE+ IEEE 802.3at/af and 24V Passive PoE • Quiet, Fanless Operation <p>Type Unifi or approved equivalent. Price include 19" rack with all needed accessories, the works include power connection with socket and 3X1.5mm cable from UPS power supply. All works shall be as specifications and engineer instructions.</p>	No.	2		-
1.4	<p>Wi-Fi Access point with the following: Environment: Indoor/Outdoor, Min. 2.4 GHz Radio Rate: 450 Mbps, Min. 5 GHz Radio Rate: 1300 Mbps, PoE Mode: 802.3af PoE/802.3at PoE+, Power Supply: PoE, Ports (min.): (2) 10/100/1000 Ethernet, Min. Wi-Fi Client Associations: 250. Complete including installation, patch cables and fittings according to engineer instruction and specifications. Type: Unifi, Cisco or approved equivalent.</p>	No.	1		-
1.5	<p>Supply, install, connect, test and operate Data Cables: Screened Fully Shielded twisted pair CAT7 4X2X26/7 Conductor: Annealed Bare Copper Conductor size: (min.) 6.4 mm Insulation material: flame-retardant PVC or halogen-free (HFFR). Shielded material: Aluminum/Polyester Foil 100% coverage Standards (min.): IEC61156, IEC 11801-1, RoHS-2 2011/65/EU, IEC 60332-1 Impedance: 100 Ω +/- 10 Ω @20 °C Max. DC resistance: 148 Ω/KM @20 °C Frequency range (min): 1-500 MHz Operating temp. (min): -40 to 65 °C Flammable resistance Type TELDOR or approved equivalent type</p>	m.	30		-

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
2	<u>IV-CCTV SYSTEM:</u>				-
	Supply , install and commissioning Complete Closed Circuit Television (CCTV) system as described in Specification below and shown on Drawings, including accessories,conduiting, cables, cable trays where necessary and the like, fixing in position according to below:				-
2.1	<p>Supply, install, test and operate 6MP IP PoE smart network day and night camera Sensor: 1/ 1.8” 6MP sensor (min.) True day and night Infrared Cut Filter Removal IR Range: 70m (min.) Weather proof: IP66 (min.) Video Compression H.264+/H.264/MJPEG Video Bit Rate: 32 Kbps – 16 Mbps(min.) Resolution: 3072×2048 (min.) Communication Interface: RJ45 10M /100M/ 1000M Ethernet port Alarm Trigger: Motion detection, Tampering alarm, Network disconnect, IP address conflict, Storage exception.</p> <p>The works include a junction box – IP66 (min) - female RJ45 socket, glands, connections, fixed near the camera in wall or steel pole and with ceiling/ wall mounting bracket included, price include data cable CAT7 S/FTP as per data cable item and specifications.</p> <p>All works according to engineer instructions and specifications. Type Samsung, Provision, Hikvision or approved equivalent type.</p>	No.	13		-

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
2.2	<p>Supply, install, connect, test and operate 16 network camera, Smart - NVR Network Video Recorder PoE, with alarm signals, static and dynamic IP access, storage capacity 2X(4.0 Tbyte) SATA Western Digital Purple 5400RPM, 6Gb/s , anti-static hot galvanized assembly network rack 12U with transparent cover and grounded, min. 1920×1080 resolution HDMI and VGA output, Motion detection, video tampering, video exception alert and video loss alert functions, two HDMI ports (min.), VGA output, support cloud storage, 220V/50Hz, works include connections to the existing CCTV network as per engineer instructions and specifications.</p> <p>Fully compatible with the IP camera type and brand, Type Samsung, Provision, Hikvision or approved equivalent type.</p> <p>Price include power connection including cables, PVC, sockets, connection to network data switch including CAT7 cables, PVC, and all needed accessories, 19" rack with all needed accessories to fix the system. All works shall be as specifications and engineer instructions.</p>	No.	1		-
2.3	<p>Supply, install, test and operate an 16 port PoE Gigabit Switch with SFP</p> <ul style="list-style-type: none"> • 16 Gigabit RJ45 Ports • Min, 2 SFP Ports • Non-Blocking Throughput: 10 Gbps • Switching Capacity: 20 Gbps • Min. Forwarding Rate: 14.88 Mpps • Maximum Power Consumption: 200W • Supports PoE+ IEEE 802.3at/af and 24V Passive PoE • Quiet, Fanless Operation <p>Type Unifi or approved equivalent.</p> <p>Price include 19" rack with all needed accessories, the works include power connection with socket and 3X1.5mm cable from UPS power supply. All works shall be as specifications and engineer instructions.</p>	No.	1		-

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
2.4	Supply, install, test and operate 220V/50HZ 45" 4K LED smart Android monitor with two HDMI ports (min.), Ethernet port RJ45, and Wi-Fi. The works include wireless mouse and keyboard (as per HP or approved equivalent type) and include connecting the monitor with the two NVRs including HDMI cables, repeaters and all parts and all accessories needed to the monitoring/administration room, also connecting the monitor with the nearest Ethernet switch including CAT7 cables, ducts, sockets, connections and all needed parts and accessories. Type Samsung, LG or approved equivalent type.	No.	1		-
2.5	Supply, install, connect, test and operate Data Cables: Screened Fully Shielded twisted pair CAT7 4X2X26/7 Conductor: Annealed Bare Copper Conductor size: (min.) 6.4 mm Insulation material: flame-retardant PVC or halogen-free (HFFR). Shielded material: Aluminum/Polyester Foil 100% coverage Standards (min.): IEC61156, IEC 11801-1, RoHS-2 2011/65/EU, IEC 60332-1 Impedance: 100 Ω +/- 10 Ω @20 $^{\circ}$ C Max. DC resistance: 148 Ω /KM @20 $^{\circ}$ C Frequency range (min): 1-500 MHz Operating temp. (min): -40 to 65 $^{\circ}$ C Flammable resistance Type TELDOR or approved equivalent type.	L.M	60		-
2.6	Supply, install, connect, test and operate 220V/50HZ 19" LED monitor with HDMI port (min.) and switch for 4 NVRs. The works include mouse and keyboard (As per HP or approved equivalent type) and include connecting the monitor with the NVR including HDMI cables and all accessories needed. Type HP, Samsung, LG or approved equivalent type.	No.	1		-

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
2.7	UPS system for the CCTV NVR and camera system. The system must be capable of operating the whole CCTV system with the monitors up to 10 continuous hours. The system must be able to be fully recharged in max. 3 hours. Battery bank OPzV type.	L.s	1		-
	<u>Section 6: Fire Alarm System</u>				-
1	Supply, install fire alarm network as specified on drawings, including Rigid Fire resistant pvc conduits, fire proof cables 4 x0.8mm ² , pull box, connection to every fittings and handing over completely clean, tested and in operable conditions. complete fire alarm analogue addressable control panel, 4 Loops each loop with min. 99 addresses and can linking many other slave programming with standard interface and all parameters read directly from the front panel large LCD display, authorized access day and night sensitivity setting, possible to activate any output device acc. To specific logical manipulation of input devices/zones and control panels All events shall be stored in memory and may be observed on the LCD display, or on PC monitor or hard copy printed. Abnormal conditions in any system`s device could be displayed in detail, incl. alarm, trouble, maintenance alarm and other data the panel shall be equipped with battery and battery charger and all related accessories as specified and shown on drawings. Type Telefire or approved equivalent.	L.s	1		-
2	Supply, install addressable ionization smoke detector of twin chamber with latching electronic circuitry, two wire connection to fire Alarm network, ceiling mounted. Type Telefire or approved equivalent.	No.	30		-
3	Ditto, but heat detector.	No.	3		-
4	Supply, install addressable break Glass call point for internal use surface/flush mounting with key operated test facility and plastic coated glass with English / Arabic logo " Break Here اكسر هنا " Type Telefire or approved equivalent.	No.	14		-

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
5	Supply, install an indoor/outdoor alarm bell with light and with low level sound 75db(A) at 1 meter, Low current consumption, variable tones and volume control with red flashing light. Type Telefire or approved equivalent.	No.	10		-
<u>Section7: SiteLayout</u>					-
Site layout works including manholes with steel covers, pipes, digging, PVC pipes, underground works, laying down, all pipes installed in a place that a car may pass through should be SN-8 as per site layout drawings. All the works must be according to engineer instructions and specifications.					
The following type of switches shall be included:					
1	Approve, supply, install and test; electrical manholes 100cm with min. depth of 100cm, complete with cast iron cover 25T and cover ring. Price shall include but not limited to; excavating, backfilling with fine sand, compaction, external insulation, pipe connection, manhole internal finish (lebood) and all related works as per specifications, drawings, international standards, local regulations and engineer satisfaction	No.	4		-
2	Ditto, but ϕ 150cm	No.	1		-
3	Approve, supply, lift to position, install and test; buried in soil, under tiles, Siksik or Kholyot UPVC pipes for electrical cables and connections ϕ 100, complete with all required and necessary accessories, price shall include all related works (excavating, warning tape, backfilling with fine sand, covering with concrete layer ...) as per specifications, drawings, international standards, local regulations and engineer satisfaction.	L.M	350		-
<u>Section8: Miscellaneous</u>					-

ITEM No.	DESCRIPTION	UNIT	QTY.	RATE (\$)	AMOUNT (\$)
1	<p>Supply, install and testing lightning protection system, the protection radius area is $R_p=48-50m$, $\Delta T=30\mu s$, level protection $D=20m$, the system including pulser emitting element 60 with actual height of terminal above roof $H=6m$, down conductor of stranded copper conductor $95mm^2$ or tape $30x3mm$, fixing brackets and supports, inspection manhole, testing arrangements, electrodes, PVC chairs, inspection boxes, earthing pits with cast iron cover, connectors, clamps to obtain resistance less than 3 Ohm for three separate earthing system.</p> <p>The contractor should prove, measure the total grounding system resistance not more than 2 Ohms, all according to specifications, drawings and engineer's instructions. protection cover and grounding pits as per standards and drawings. All works and materials shall be approved by the engineer prior to placing orders. Type ABB helita PULSAR 60 or approved equivalent type.</p>	Ls.	1		-
2	<p>Supply, install, test and commission Earthing System for the main electrical network as per drawings, work includes but not limited to earthing concrete manholes, cast iron cover with 19 mm electrodes, earthing cables, and all necessary works. Resistance of the system must not exceed 2 Ohms, complete cables connection to the electrical room and risers with all necessary underground PVC pipes, connections, accessories, and all according to drawings, specifications and engineer instructions.</p>	Ls.	1		-
TOTAL OF BILL 10 (ELECTRICAL WORKS) - US\$					-
<u>MOVE TOTAL TO SUMMARY</u>					

GRAND SUMMARY FOR BOQ

GRAND SUMMARY FOR BOQ FOR CONSTRUCTING MEDICAL WASTE TREATMENT FACILITY IN GAZA GOVERNORATE		
BILL No.	DESCRIPTION	AMOUNT (USD)
BILL 01	GENERAL ITEMS	INCLUDED
BILL 02	EARTH WORKS	-
BILL 03	CONCRETE WORKS	-
BILL 04	BLOCK, PLASTERING & PAINTING WORKS	-
BILL 05	TILING, FLOORING & MARBLE WORKS	-
BILL 06	WOODEN, ALUMINUM & METAL WORKS	-
BILL 07	INSULATION WORKS	-
BILL 08	SITE WORKS	-
BILL 09	MECHANICAL WORKS	-
BILL 10	ELECTRICAL WORKS	-
GRAND TOTAL		-
GRAND TOTAL IN WORDS		
()		

Contractor Name : _____

Signature with stamp: _____

Date: _____ / /20