

**REPUBLIC OF LEBANON
COUNCIL FOR DEVELOPMENT & RECONSTRUCTION**



**Lebanon Emergency Assistance Project
(LEAP)**

Rehabilitation of Schools–Shelters

Volume 3 – Bill of Quantities

LEAP-SH-SW-MEHE- Batch 1 – Lot 3

(Book 3 of 3)

Prepared By:

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SPECTRUM Engineering Consultants S.A.R.L
ISO 9001:2015

Lebanon Emergency Assistance Project (LEAP)
Tender Preparation and Construction Supervision
For the Rehabilitation of Schools–Shelters

LEAP-SH-SW-MEHE- Batch 1 – Bill of Quantities

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LEAP-SH-SW-MEHE- Batch 1
Lot 3 – Akkar Governorate (23 Schools)

School No.	School Name	CERD No.	Governorate / District
3	Al Sheikh Ayyash Mixed Public School مدرسة الشيخ عياش الرسمية المختلطة	513	Akkar
4	Sheirhmarin Mixed Public School شير حميرين الرسمية المختلطة عكار	514	Akkar
8	Al Shiekh Zannad Public School الشيخ زناد	520	Akkar
9	El Kneysa Mixed Public School مدرسة الكنيسة الرسمية المختلطة	522	Akkar
10	El Simmakiah Mixed Public School مدرسة السماقية الرسمية المختلطة	524	Akkar
11	Sulaiman Aly - hekr el daher Public School مدرسة المربي سليمان عزيز العلي الرسمية حكر الظاهري	525	Akkar
29	EL Kawashra Mixed Public School مدرسة الكواشرة الرسمية المختلطة	577	Akkar
30	Ammar El Bikat Mixed Public School مدرسة عمار البيكات الرسمية المختلطة	579	Akkar
31	Kashlak Public School مدرسة قشلق الرسمية	580	Akkar
32	Ain El Zeit Mixed Public School مدرسة عين الزيت الرسمية المختلطة	587	Akkar
33	El Bireh Secondary Public School ثانوية البيرة الرسمية	590	Akkar
50	El Sindyaneh Mixed Public School مدرسة السنديانة الرسمية المختلطة	640	Akkar
51	Mouzeid Dendashle - Mashta Hammoud مدرسة المربي مزيد الدندشلي مشتي حمود الرسمية	650	Akkar
52	Qarha Mixed Public School مدرسة قرحة الرسمية المختلطة	654	Akkar
53	Rafik Hariri - Rajem Issa Public School مدرسة رفيق الحريري الرسمية المختلطة - رجم حسين	656	Akkar
54	El Heishe Secondary - Wadi Khaled School ثانوية الهيشة الرسمية - وادي خالد	663	Akkar
58	Tel Hmeira Mixed Public School مدرسة تل حميرة المتوسطة الرسمية	1409	Akkar
59	El Amayer Public School مدرسة العمائر الرسمية	1459	Akkar
61	Kfartoun Public School ثانوية كفرتون الرسمية	1490	Akkar
62	El Awadeh Public School مدرسة العوادة الرسمية	1550	Akkar
63	El Bkayieh Mixed Public School مدرسة البقيعة الرسمية المختلطة	1553	Akkar
70	Sandiyanit Zeidan Public School ثانوية سنديانة زيدان الرسمية	1637	Akkar
79	El Bireh Elementary Public School متوسطة البيرة الرسمية	589	Akkar

***Bill of Quantities - Lot-3 - School CERD: 663
El Heishe Secondary - Wadi Khaled School***

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 663

Summary

<u>Description</u>	<u>Amount (US \$)</u>
Part-1 - Civil, Structural and Architectural Works	
Part-2 - Mechanical Engineering Services	
Part-3 - Electrical Engineering Services	
	
* Total Amount of Bill of Quantities	
* Discount by Tenderer (_____ %)	
	
	
* Total Amount of Tender (VAT Not Applicable)	
	
	
* Total Amount of Tender in Words:	
.....	
.....	
.....	

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 663

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
1	<u>SITE PREPARATION AND DEMOLITION</u>				
1.1	<u>Demolishing and Removal of Debris</u>				
1.1.1	The works include all types of demolition and the removal of debris and damaged elements such but not limited to, the following: - Existing plastering and concrete items such as foundations, columns, slabs, etc. - Damaged Tiling (floors and walls) - Toilet fixtures and pipes installation of all sizes - Counter tops, bases and sinks - Water tanks of different types - Hollow concrete block walls or concrete walls of all sizes - Demolition of the existing ramps / Stairs and the execution of the given plans and specifications - Including the necessary equipment for the removal of debris and all resulting materials - etc.	LS	1.00		
	<u>Rate or Lump Sum in Words:</u>				

Carried To Collection

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 663

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
2	<u>SITE PREPARATION AND DEMOLITION</u>				
2.3	<u>Existing Walkways</u>				
2.3.1	Repair existing walkways at project site boundary; precast concrete paver tiles, bases courses, etc., as necessary, where damaged or distributed by new construction without affecting the adjacent undamaged areas; make good and joint at junction with new precast concrete paving and/or curbing as required and to Engineer's approval.	LS			
	<i>Rate or Lump Sum in Words:</i>				
2.5	<u>Ramp for External Existing Sidewalk or for accessibility purpose</u>				
2.5.1	Supply and install external pedestrian ramp as per approved shop drawing submitted by contractor Work to include: - Remove parts of sidewalk including curbstone and existing tiles - Remove the debris to outside the site - Submit detailed shop drawing compatible with ADA requirements - Supply and install concrete curbstone for the ramp - Supply and install floor tiles identical to the existing with mortar and all layers - All needed items as per the Engineer instructions	LS			
	<i>Rate or Lump Sum in Words:</i>				
2.9	<u>Rehabilitation of Playground Slabs (External Playground)</u>				
2.9.1	Clean the rehabilitated places by removing all debris and make good all the edges and remove all broken slabs & failed slabs and remove to outside the site all the debris & refused items, cast proper concrete in places where the removal of all debris (No patching is allowed for the existing concrete surfaces) Work to include: - Removal and cleaning the location - Materials, fill - Labors - Make good the surfaces - Lining and marking all playgrounds as per site instructions - All needed refurbishing works as per the Engineer instructions	m ²			
	<i>Rate or Lump Sum in Words:</i>				
	<i>Carried To Collection</i>				

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Bill of Quantities - Lot-3 - School CERD: 663

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
3	<u>CONCRETE</u>				
3.2	Reinforced Concrete Footings, Tie Beams, Columns and Walls Drop - Parapete - Slab on Grade				
3.1.2	Supply, cast and vibrate concrete for footing, tie beams, walls, parapets. Up stand, drop parapets with a crushing strength 350kg/cm2, cost to includes: - Formwork - Steel reinforcement - All needed work as per Specifications and the Engineer instructions <i>Rate or Lump Sum in Words:</i>	m3			

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
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Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
4	<u>MASONRY</u>				
4.1	<u>Hollow or Solid Concrete Blocks and Claustra</u> Supply and install concrete blocks as per drawings Work to include: - All places as per the drawings, and the Engineer instructions. - Materials - Cement mortar and the use of extruded nets and reinforcement by means of metal gates and the placement of angles of galvanized steel iron of concrete columns thickness of 4 mm every 60 cm - Labors and all items needed and instructions by the Engineer				
4.1.2	10 cm hollow concrete blocks <i>Rate or Lump Sum in Words:</i>	m ²			
4.1.4	15 cm hollow concrete blocks <i>Rate or Lump Sum in Words:</i>	m ²			

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Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
	<i>From Collection</i>				
4.2	<u>Rehabilitate and Clean masonry walls showing deep crack</u> The repair method requires the replacement of some stone masonry that has been damaged by the crack. It will include the use of horizontal reinforcement. Remove cracked stones in a “toothed” pattern to the extent that a sound repair is possible. Clean the crack if it continues to extend into the mass masonry and grout with non shrink mortar. Key new stone in stone masonry perpendicular to the wall surface in addition to the “toothed” and stepped pattern parallel to the wall surface. With larger more extensive cracks remove additional stones in a stepped pattern on both sides and the top of crack and restore by installing new stones. With smaller repairs lesser amounts of stones will have to be removed. Place horizontal reinforcement every 5th course. Mechanical ties to secure geogrid may be required. The horizontal reinforcement shall bridge over the crack and extend the length of new stone masonry. Replicate the coursing pattern of the existing exposed surface. Place new stones that are not exposed in an alternating stretcher-header bonding pattern to wall surface or top of wall. Construct the new stone masonry in complete horizontal courses where possible. Do not construct more than 5 courses before allowing masonry to dry. Lay subsequent stone courses on fresh wet mortar. Apply mortar at head joints as well as bed joints and finish one-half the width of the mortar joint below the surface of the stones.				
4.2.1	<u>Rehabilitate Natural Stone Facades</u> Rehabilitate works on natural stone facades work should be by replacing the damaged stone and not filling with mortar. Work to include: - Determine location of damaged stone walls and location of dampness. Broken or damaged pieces to be replaced, then cleaning & leveling; without affecting the adjacent undamaged - Treat the dampness and the causes - Repair the stone by renewing the damaged and replace it with new ones with same stone and apply one layer of water proofing transparent paint - Clear the place and infill in between the coarse (Lining) - All works as instructed by the Engineer <i>Rate or Lump Sum in Words:</i> Carried To Collection	m ²			

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Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
	<i>From Collection</i>				
5	<u>METAL WORKS</u>				
5.1	Provide New Steel Work (Door & Windows)				
5.1.1	Provide new steel doors with related accessories as per <i>Rate or Lump Sum in Words:</i>	Nº			
5.1.3	Provide new double glazed aluminum windows with new burglar proof protection <i>Rate or Lump Sum in Words:</i>	Nº			
5.2	<u>Rehabilitate and Maintain the Existing Steel Work (Burglar Proof Protection + Opening)</u> Rehabilitate the existing steel windows or doors as per specifications and drawings and the Engineer instruction Work to include: - Remove all damaged members and replace by new ones - Rub completely to secure all parts and use putty to make faces smooth - Apply two layers of anti rust paint - Apply putty - Apply three layers of epoxy external paint - All needed items as per the Engineer instructions				
5.2.1	Rehabilitate existing steel doors <i>Rate or Lump Sum in Words:</i>	Nº			
5.2.2	Rehabilitate existing steel gates <i>Rate or Lump Sum in Words:</i>	Nº			
5.2.4	Rehabilitate existing burglar proof steel protection <i>Rate or Lump Sum in Words:</i>	Nº			
5.2.5	Rehabilitate and paint existing steel louvers with related <i>Rate or Lump Sum in Words:</i>	Nº			
5.2.6	Rehabilitate and paint existing steel window / Curtain Wall <i>Rate or Lump Sum in Words:</i>	Nº	1.00		
	<i>Carried To Collection</i>				

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Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
5.3	<u>Rehabilitate Existing Steel Shed Works</u> Rehabilitate the existing steel elements of the existing shed and the work to include: - Remove existing cover (Asbestos, TOT, etc.) and to be dismantled and carted away to outside the site to dumps approved by municipality - Brick tiles to be disassembled and removed and stored in appropriate location as per engineer's instruction and to checked for reused if needed - Clean, rub and repaint all steel structure and do the necessary reinforcement - Damaged steel structure to be replaced with new steel structure similar to existing. - Support and add new beams similar to existing. - Remove existing paint & clean deeply as per SSPC code and ISO 8501 - Apply base and epoxy as specified - Supply the roof covers as per drawings - Install the galvanized steel gutter (No Welded) and all Steel pipe works - Corrugated Metal sheet flashing between walls and shed roof with mastic - All needed items as per the Engineer instructions				
5.3.1	Rehabilitate and strength steel sheds and replace existing sheet by insulated sandwich panel <i>Rate or Lump Sum in Words:</i>	m ²	4.00		
5.3.2	Rehabilitate and strength steel sheds and replace existing sheet by polycarbonate triple layer <i>Rate or Lump Sum in Words:</i>	m ²	2.00		
5.3.3	Rehabilitate and strength steel sheds and replace existing sheet by insulated sandwich panel with polycarbonate triple layer <i>Rate or Lump Sum in Words:</i>	m ²			
5.3.4	Rehabilitate and strength steel sheds and replace existing sheet by PVC sheet or as exisitng <i>Rate or Lump Sum in Words:</i>	m ²			
<i>Carried To Collection</i>					

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Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
5.3.5	Rehabilitate and strength steel sheds and replace existing sheet by brick tiles <i>Rate or Lump Sum in Words:</i>	m ²			
5.3.6	Rehabilitate and strength existing roof bricks and change broken bricks by new ones <i>Rate or Lump Sum in Words:</i>	m ²			
5.3.7	Rehabilitate connection between wall and corrugated roof, a new gutter to be Provided <i>Rate or Lump Sum in Words:</i>	m			
5.5	<u>Rehabilitate and Maintain Steel Handrail</u> - Rehabilitate the existing metal handrail and remove the damaged members and replace by new - Reinforce the existing handrail with similar members in addition to the rail and all necessary accessories - Remove existing paint & clean deeply as per SSPC code and ISO 8501 - Apply one layer of epoxy base paint - Apply putty - Apply epoxy paint as per specification All needed items as per the Engineer instructions				
5.5.1	Floor Mounted <i>Rate or Lump Sum in Words:</i>	m			
5.5.2	Wall Mounted <i>Rate or Lump Sum in Words:</i>	m			

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Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
6	<u>WOOD AND PLASTICS</u>				
6.1	<u>Joinery Works</u>				
6.1.1	<u>Rehabilitate Existing Kitchen Cupboards</u> Rehabilitate existing cupboards, cabinets, drawers, counters, etc., for the existing kitchen. Works to include replacing damaged elements, accessories, material, labor, equipment, maintaining support, change of the top of counter by new resin counter as specified, etc. As per engineer's approval.				
	- Repair wood elements in accordance with AWI Quality Standards requirements. - Repair framing and sash members with mortise and Tenon joints. Ensure joints and connections are flush, hairline, and weather-tight. - Scarf joints permitted when wood matches in color and grain texture. Form sills and stools in one piece. - Fabricate components with minimum clearances and shim spacing around perimeter of assembly, yet allowing installation and dynamic movement of perimeter seal.				
6.1.1.1	Kitchen Cupboards <i>Rate or Lump Sum in Words:</i>	m			

Carried To Collection

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Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
7	<u>THERMAL AND MOISTURE PROTECTION</u>				
7.0	<u>Preliminaries</u>				
7.0.2	Dismantle and remove all existing materials on roof: Tiles, Membranes, existing water tanks, Mechanical Pumps and Systems, Electrical Systems, skirting, etc.; and all equipment as per engineer instructions The unwanted/ unused materials should be cart away from the site The remaining items should be reinstalled in a proper way as per engineering instructions <i>Rate or Lump Sum in Words:</i>	LS	1.00		
7.1	<u>Roof Waterproofing</u>				
7.1.1	Works should be applied and done by experts with previous experience in similar works. Works to include: - DEEP cleaning of all surfaces and carting away of dust & - Concrete pad for water tanks as indicated - Sand cement screed layer to Provide proper slopes minimum 0.75% - Expansion joint sealant to be done respecting back rod, unbonding tape, adequate thickness of sealant, type & finish of sealant (fire rated) & design drawings especially on roof & planters. - Provide tackle coat (Proper) - Provide 4mm thick, SBS layer from an approved manufacturer - Provide protection for all pipe works and drains - Provide heat insulation layers of 35 KG/m ³ where required - Provide Geotextile layers - Provide all aluminum flashing with mastic - Provide finishing material as required - All as specified and approved shop drawings <i>Rate or Lump Sum in Words:</i>	m ²	45.00		

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
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Bill of Quantities - Lot-3 - School CERD: 663

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
8	<u>DOOR AND WINDOWS</u>				
8.1	<u>Wooden Doors and Windows</u>				
	Supply and install all timber work with all related items The joinery works should be of the first class type and as per specifications and drawings Work to include:				
	- Material and labors				
	- All accessories to be heavy duty (Hinged, Lock, Glass vision, as required, etc.)				
	- The frame for any width (Steel, Wood, etc.)				
	- Paint as follows:				
	- Anti rust layers				
	- Putty + one layer of undercoat				
	- Three layers of epoxy paint				
	- Apply and fix 6mm wired clear glass				
	- View Permitting glass opening where needed				
	- remove the existing timber panels				
	- repair the edges				
	- The Contractor should submit shop drawings				
	- All needed items as the Engineer instructions				
8.1.1	<u>Timber Doors</u>				
	Supply and install flush timber door as per drawings with laminated plastic facing and the door should have 10cm width frame between the plywood and fill with timber beads by tongue and groove each 5cm, and the door edges should behad wood and fixed by tongue and groove frames should be as specified, with fixed glass panel vision window, and similar to existing, and to the Engineer's instructions				
	- Works included, all accessories and fittings, pre-painting and finishing paint sides of doors and box frames.				
	- All works should be done as per the Engineer instructions				
8.1.1.1	Provide new double leaf wooden door	No			
	<u>Rate or Lump Sum in Words:</u>				
					
8.1.1.2	Provide new single leaf wooden door with view frame	No			
	<u>Rate or Lump Sum in Words:</u>				
					

Carried To Collection

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Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
	<i>From Collection</i>				
8.1.3	<u>Rehabilitate the Existing Timber Doors</u> As stated in the Preambles of Item 8.1 In addition, rehabilitate the existing timber doors: The minimum amount of existing timber should be removed to allow an effective repair to be formed. Cut out deteriorated area of timber in sloping splice to give optimum area of surface to be glued & fixed. Well-seasoned timber to be used in forming a repair with the line and density of grain (number of growth rings) of new timber matching the existing as closely as possible. For all joinery work, timber with shakes, fissures, warping, heartwood, sapwood or numerous/large knots should be avoided for use in repair. Always work new material to the line of the existing and avoid unnecessary trimming of original timber. Repairs should follow any existing deformations in the line of the wood element (e.g. door or window). Avoid mixing timber species between new and existing in a repair as joint between the two is likely to fail from different rates of expansion and contraction during dry & damp conditions. Where possible, spliced repairs to be designed to ensure moisture is towards the outer face of timber and that moisture does not lay on the repair joint. The length of the splice is governed by section of timber and the nature of component being repaired and it should be designed to ensure an effective bond between new and existing sections of timber. Where wood element are to be dismantled as part of the repair process, always mark and record the constituent parts before dismantling. similarly, number of glass panes/quarries before removal. If applicable carefully soften putty or remove wood trim and then remove glass. Use glue, to connect a new outer section of bottom rail to the existing sound timber. Drill and insert new wooden pins or fix using brass screws from inside. Casements or sashes are often in sound condition but the joints have become loose due to the break down of glue and loose wedges. The wedges will often be easily removable and will probably be unsuitable for re-use. It may be for the joints to be pulled together successfully. Attach door frame and shims to perimeter opening to accommodate construction tolerances & all irregularities. Align door plumb and level, free of warp or twist. Maintain dimensional tolerances and alignment with adjacent work. Install operating hardware.				
8.1.3.1.1	Rehabilitate and paint existing single leaf timber doors with related accessories <i>Rate or Lump Sum in Words:</i> <i>Carried To Collection</i>	Nº	18.00		

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Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
8.1.3.1.2	Rehabilitate existing double leaf door <i>Rate or Lump Sum in Words:</i>	Nº			
8.1.3.1.4	Rehabilitate wooden windows <i>Rate or Lump Sum in Words:</i>	Nº			
8.2	<u>Aluminum Doors and Windows</u> Fabricate, supply and install aluminum works as manufactured by SIDEM 2000 first choice with all necessary accessories as per the drawings and the Engineer instructions, cost to include all doors and windows: - Reveals hard stone 3cm thick, all around for external opening - Apply EPDM around door and windows where necessary - Single glass 6 mm - Double glass 6-12-6 mm (Outer Glass should be Tempered) - Hinges and locks - Joint Filler - Mosquito Screen - Mesh - All items needed as per the Engineer instructions - All as specified and base on an approved shop drawings after exact dimensions				
8.2.1	<u>New Aluminum Panels (Double Glass)</u> Supply and install the fabricated aluminum panels with double glass (6 - 12 - 6 mm) (Outer Glass should be Tempered or similar to existing)				
8.2.1.1	Provide new aluminum double glazed window & door panel <i>Rate or Lump Sum in Words:</i>	Nº			
8.2.2	<u>New Aluminum Internal Door</u> Supply and install aluminum door with frame and related strengthening stud, Works to include: Materials, and accessories - Labors - All needed items as per the engineer instructions. - Repair all around the opening				
8.2.2.1	Provide new aluminum partition door as indicated. <i>Rate or Lump Sum in Words:</i>	Nº			
<i>Carried To Collection</i>					

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Bill of Quantities - Lot-3 - School CERD: 663

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
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From Collection

- 8.2.3 Rehabilitation Existing Glazed Aluminum Panels (s)**
Replacing Broken Glass. Fixing Hardware Issues: Check the functionality of latches, hinges, and other hardware. If any parts are broken, replace them with new ones to ensure the window operates smoothly. After repairs, apply a high-quality sealant around the edges to prevent moisture intrusion. If the paint is peeling or faded, consider repainting the frame with a metal paint formulated for aluminum to enhance durability and appearance.

8.2.3.1	Rehabilitate existing windows, doors and gates	Nº	16.00		
	<i>Rate or Lump Sum in Words:</i>				
					
					

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Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
9	<u>FINISHES</u>				
9.1	<u>Cement Plaster</u>				
	Supply and install sand cement plaster on concrete and block wall surfaces as specified				
	The plaster layer should be own a base rough layer				
	The plaster works should be on level points and each point should be at 1.5 m from the second only				
	Work to include:				
	- Materials and accessories (galvanized, wire mesh, cover beds, etc.)				
	- Labors				
	- All addition watering				
	- All tools				
	- Plaster thickness more than 2 cm				
	- All needed items as per drawings and the Engineer instructions				
9.1.1	<u>Internal and External Plaster Works</u>				
9.1.1.1	Supply and apply one layer of sand cement plaster over a rough textured layer of plaster				
	Price included all accessories, material, scaffolding and labor, etc.	m ²			
	<i>Rate or Lump Sum in Words:</i>				
					
					

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Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
From Collection					
9.1.2	Repair of Existing Plaster (Internal - External) (Cracks,				
9.1.2.1	Rehabilitate and repair cracked and damaged plaster indoor and outdoor Work to include: - Determine the location and remove all loose items around the area - Remove the cracked plaster layer - Remove the pulled out layers - Clean the places with suitable materials - Fill all cracks after widening by (No Suggestions) or approved equal. - Remove loose and other deteriorated materials prior to the new repair. Take special care not to damage the adjacent original materials. Prepare mortar joints for installation of lateral reinforcement where it is required. Use thin steel bars to clean joints to maximum depth possible. Remove loose mortar. Mix mortar with minimal amount of water (potable) prior to use. All separation cracks between perpendicular walls shall be filled grout to reduce additional movement from wind loads and thermal expansion-contraction. - Clear debris from crack by probing, brushing, and blowing. - Force non-shrink mortar mixture into crack as deep as possible with hands, wood and metal probes. Use as dry a mix as possible. Use stone bats to fill larger crack voids. Ensure mortar is forced into smaller/deeper cracks. Mortar grout will be fluid in order to flow into crack. Either grout bags or gravity flow shall be used depending on the conditions. Fil Protect repairs from rapid drying by misting, shading, protecting from dry wind cracks in a series of applications rather than one large application. Final application shall not be flush with the surface, but shall be one half the width of the crack below the surface. Remove all tool marks with brush. - Apply the finish rough plaster layer - Install galvanized steel mesh 20 cm width at least - Apply the second smooth plaster layer Rate or Lump Sum in Words:	LS	1.00		

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 663

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
9.2	<u>Tiling Works</u> Supply and install all tiling items for floors, with the skirting Work to include all materials and labors and the Contractor should use all necessary rods and levels as per the Engineer instructions Price to include: - Sand below tiles - Materials, tiles, mortars - Labors - Rubbing - Filling between tiles - Filling the skirting - Remove unsuitable items - Cleaning the places - All needed items as per the Engineer instructions				
9.2.1	<u>New Full Mass Colored Ceramic for Floors</u> Ceramic tiles and tilework as specified and detailed, installed complete; Including for substrate preparation, cement: sand screeds or plaster backing coats; setting, jointing and grouting; tile trim and accessories; sealants; and all other related ancillaries as indicated or required				
9.2.1.1	Supply and install anti skid colored full mass ceramic tiles for classroom (first choice) for all floor toilets, kitchen and laboratory (existing and new) or similar to existing <i>Rate or Lump Sum in Words:</i> 	m ²			
9.2.1.2	Skirting same type of floors or similar to existing <i>Rate or Lump Sum in Words:</i> 	m			
9.2.2	<u>New Glazed Colored Ceramic for Walls</u>				
9.2.2.1	Supply and install glazed colored ceramic for walls Include Ceramic Corner (first choice as specified or similar to <i>Rate or Lump Sum in Words:</i> 	m ²			

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 663

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
9.2.3	<u>New Tiles for stairs</u> Supply and install tiles first choice for the new stair (treads 3cm thick - Risers 2cm thick) and landing - tiling 2cm and for all floors or otherwise specified color type and quality to be submitted for approval, works to include: - Labor, materials and installations - Under tile fill - Mortar - Lining - Step (Tread + riser) and landing and all type of skirting - And needed items to complete the works as per the Engineer instructions				
9.2.3.2	Granite 2cm Thick (Tread and Riser) <i>Rate or Lump Sum in Words:</i>	m			
9.2.3.3	Mosaic Similar to existing 4cm Thick minimum (Tread and Riser) <i>Rate or Lump Sum in Words:</i>	m			
9.2.4	<u>Repair existing broken floor tiles and skirting (all types) and reinstall by new, similar to existing for all rooms and</u> ..				
8.2.4.1	Rehabilitate and repair all damaged and broken tiles, and skirting for any type (marble - ceramic - mosaic - Cement). Remove broken or damaged pieces to be replaced without affecting the adjacent undamaged areas Work to include: - Remove all debris as specified - All materials and labors - Difference tiles (shapes thickness, dimension, pattern) as needed. - Cutting and repair - Grouting - Polish and rubbing - All needed items as per Engineer comments and complete to Engineer approval. <i>Rate or Lump Sum in Words:</i>	LS	1.00		
<i>Carried To Collection</i>					

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 663

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
9.2.5	<u>Rehabilitate Existing Stair Treads and Riser</u> Remove the broken treads and risers, install and supply new ones similar to the existing with the needed side bases, width as per site dimension with skirting and tiles for landing The work to be as per the Engineer instructions				
9.2.5.1	Existing Mosaic Stair the price including Skirting tiles & Landing <i>Rate or Lump Sum in Words:</i>	m			
9.2.6	<u>Threshold Tiles (Doors, Marble Topping)</u> Supply and install 3cm thick threshold as per the Engineer instructions Cost to include: - Fixing materials - All materials - All labors - All Edges must be rounded or chamfered - All needed items as per the Engineer instructions				
9.2.6.1	Natural Stone Threshold or similar to existing <i>Rate or Lump Sum in Words:</i>	m			
9.2.6.2	Marble Coping or similar to existing <i>Rate or Lump Sum in Words:</i>	m			
9.2.6.3	Natural Stone Coping or similar to existing <i>Rate or Lump Sum in Words:</i>	m			

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 663

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
9.2.7	<u>Clean and Rub the Existing Floor Tiles and Skirting</u> Rehabilitate any type of flooring tiles and skirting (ceramic - mosaic - etc.) Work to include: - All materials and labors - Grouting - Polish and rubbing - All needed items as per the Engineer instruction as specified				
9.2.7.1	Type 1: Marble or similar to existing <i>Rate or Lump Sum in Words:</i>	m ²			
9.2.7.2	Type 2: Ceramic or similar to existing <i>Rate or Lump Sum in Words:</i>	m ²			
9.2.7.3	Type 3: Mosaic or similar to existing <i>Rate or Lump Sum in Words:</i>	m ²			
9.3	<u>Suspended Ceilings</u> The suspended ceiling, work to include: - All panels - All heavy duty hangers and accessories as specified - Rails (hidden type) - Special metal heavy duty suspension systems - All needed heavy duty accessories and items to complete the works - Works to be indicated on drawings and as per the - Works should be coordinated between the starting and the end of the floor panels and also should be coordinated with the electromechanical units in the ceiling - All works should be as instructed by the Engineer				
9.3.1	<u>Metal Sheet Strips Suspended Ceilings:</u>				
9.3.1.3	Rehabilitate Metal Strips <i>Rate or Lump Sum in Words:</i>	m ²			

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 663

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
9.5	<u>Painting</u>				
9.5.1	<u>Wall and Ceilings Paint Works</u> Wall paint include preparation of the base surfaces to receive the paints and apply the specified layers of putty and paint from the best quality as per specifications and as indicated in drawings The base surfaces should be clean and smooth and free from any pulled out old paints before starting application of the specified primer/undercoat. Apply 2 layers of putty then after smoothening, then 3 layers of the approved paint materials. All works and items should be as per manufacturer recommendation, compatible with each other and as per the Engineer instructions and approval, <i>All paint types must be <u>lead-free</u> and <u>Low VOC</u> (Volatile Organic Compounds)</i>				
9.5.1.2	Super Rubber Paint for old walls and ceilings <i>Rate or Lump Sum in Words:</i>	m ²	1,050.00		
9.5.1.4	Oil Paints for old walls and ceilings <i>Rate or Lump Sum in Words:</i>	m ²	825.00		
9.5.2	<u>Outside Walls Paint (Old and New Walls and Ceilings)</u>				
9.5.2.1	Paint for external old and new walls, smooth touch Work to include: - Removal of any paint or obstacle - Rehabilitate the surfaces and make them goods - Polyurethane where needed for cracks - Apply one coat of undercoat - Apply 2 coats of external paint or rolled textured paint - Apply one layer of external transparent paint (acrylic styrene copolymer elastic water proof) - All needed scaffolding and materials for the best execution of the works - All works and items should be as per manufacturer and the Engineer instructions and approval. <i>Rate or Lump Sum in Words:</i>	m ²			

Carried To Collection

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 663

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
10	<u>SPECIALTIES</u>				
10.1	<u>Bathrooms Accessories</u>				
	- Remove and cart away old damaged fixtures				
	- Supply and install all needed accessories and make good their places and their surroundings				
	- Place all frame, cover joints (stainless steel) anti-corrosion				
	- Install items and their contact with the surfaces				
	- All works should be done as per the Engineer instructions				
10.1.2	<u>Soap Dispenser</u>				
10.1.2.1	Supply and install stainless steel 316 no rust, no stain, soap dispenser wall type fixation (anti-rust materials and accessories) with all needed items or similar to existing				
	All works should be done as the Engineer instructions	No			
	<i>Rate or Lump Sum in Words:</i>				
					
10.1.4	<u>Mirror for Lavatories</u>				
	Supply and install 6mm glass mirror for lavatories with colored PVC frames as show on drawings and as stated in the specifications with all needed items and accessories or similar to existing				
	The mirror should be placed on 3mm thick plywood from the back				
	All works should be done as the Engineer instructions				
10.1.4.1	Mirror (Dimension as per site conditions and engineer instruction)	No			
	<i>Rate or Lump Sum in Words:</i>				
					

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 663

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
10.3	<u>Resin Work</u>				
10.3.1	<u>Drinking Basin</u>				
	Supply and install drinking basin as shown on drawings of resin layers 12 mm thick fixed on galvanized steel skeleton 4 x 4 cm hollow sections and as shown on drawings				
	Work to include:				
	- Materials				
	- Labors				
	- Galvanized steel skeleton				
	- All needed items and as instructed by the Engineer				
10.3.1.1	Drinking Basin -Length (up to 2.20 m)	Nº			
	<i>Rate or Lump Sum in Words:</i>				
					
10.3.1.5	Drinking Basin -Length (3.81 to 4.10 m)	Nº			
	<i>Rate or Lump Sum in Words:</i>				
					
10.3.1.6	Drinking Basin -Length (4.11 to 6.20 m)	Nº			
	<i>Rate or Lump Sum in Words:</i>				
					
10.3.2	<u>Lavatory Countertop</u>				
10.3.2.1	Supply and install complete counter for lavatories in toilets where shown on drawings to be of 12mm resin layer as per drawings and the work to include:				
	- All fixing elements				
	- All stainless steel hangers				
	- All necessary heavy duty accessories				
	- Counter edge of 30cm length				
	- All needed items and as instructed by the Engineer	m			
	<i>Rate or Lump Sum in Words:</i>				
					

Carried To Collection

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 663

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
	<i>From Collection</i>				
10.3.4	<u>Kitchen Counter</u>				
	Supply and install complete counter resin type with sink (resin) for teachers' kitchen of 18mm thick including coved splash back 20cm height and the work to include:				
	- All fixing elements				
	- All stainless steel hangers				
	- All necessary accessories				
	- All needed items and as instructed by the Engineer				
10.3.4.2	Kitchen Counter - Length (1.11 to 1.75m)	No			
	<u>Rate or Lump Sum in Words:</u>				
10.8	<u>Complete Accessible Toilet</u>				
10.8.1	Supply, construct, install, test and commission one complete accessible toilet, including all necessary civil, architectural, plumbing and ventilation works, fully coordinated and ready for use. The item shall include, but not be limited to, hollow concrete block walls, cement plaster and painting, ceramic floor and wall tiles, PU waterproofing, complete water supply piping and connections, complete drainage piping and connections, accessible WC and washbasin/lavatory, all required sanitary fittings and accessories, grab bars and other accessibility provisions, ventilation system, and external-grade plastic laminate door with all required ironmongery and fittings.				
	The Contractor shall verify all dimensions, levels, access requirements and existing site conditions prior to commencement of works and shall ensure that the toilet dimensions and layout comply with applicable accessibility requirements and are suitably adapted to the actual location and site constraints.				
	The Contractor shall prepare and submit complete coordinated shop drawings, including plans, sections, elevations, dimensions, sanitary and plumbing layouts, accessibility provisions, door details and all relevant details, for the Engineer's review and approval prior to execution. The rate shall include all materials, labour, fittings, supports, connections, testing, making good and all other incidental works necessary to provide a complete, functional and fully operational accessible toilet in accordance with the approved shop drawings, Drawings, Specifications, accessibility requirements and applicable standards				
	- Complete Accessible Toilet	item			
	<u>Rate or Lump Sum in Words:</u>				

Carried To Summary

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 663

Part-2 - Mechanical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
1	<u>GENERAL TECHNICAL REQUIREMENTS</u>				
1.1	<u>General Mechanical Requirements</u>				
1.1.2	Prepare the shop drawings for all mechanical works (where needed) and obtain approval from the Engineer before the start of executing any work. <i>Rate or Lump Sum in Words:</i>	Item	1.00		
1.2	<u>Rehabilitation Works General Requirements</u> Provide all necessary rehabilitation works and make all Mechanical systems in good condition complete including maintenance, cleaning, relocation works, replacing damaged items and equipment, removing and carting away resulting materials and equipment, testing and commissioning, and all other related works to ensure all Mechanical systems are properly working and functional.				
1.2.1	Maintenance and rehabilitation of existing plumbing works, including sanitary fixtures, changing Wc Covers, floor drains, roof drains, manholes, pumps, WC tanks, adding where applicable all necessary valves, flush valves, Traps, Elbow ...etc. removing newly installed showers, and all other necessary works. <i>Rate or Lump Sum in Words:</i>	Item	1.00		

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 663

Part-2 - Mechanical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
2	<u>SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION</u>				
2.1	<u>Drainage System</u> Supply, install and test the storm water drainage from (UPVC) pipes inside the building to outside and the pipes to be measured in Linear Meter with all related accessories, cleanout, elbows, vent hangers, and all necessary accessories as per standard installation details				
2.1.1	Ø 50 mm / UPVC <i>Rate or Lump Sum in Words:</i>	m			
2.1.2	Ø 75 mm / UPVC <i>Rate or Lump Sum in Words:</i>	m			
2.1.3	Ø 110 mm / UPVC <i>Rate or Lump Sum in Words:</i>	m			
2.2	<u>Floor Drain</u> Supply and install floor drain P.V.C. with chrome plated brass drain cover and to be the same level as the floor and do all necessary installation and connections. This includes all civil works and connection to the proper floor pipes and as per the Engineer instructions				
2.2.1	FD-01: Ø75 mm bottom outlet <i>Rate or Lump Sum in Words:</i>	Nº			
2.3	<u>Drain Cover</u> Supply and install floor drain cover (P.E) or (similar to existing) 5 mm thick on drainage pipe and to be the same level of the floor tiling. Work to include all civil works and as per the				
2.3.1	Cover for FCO <i>Rate or Lump Sum in Words:</i>	Nº			

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 663

Part-2 - Mechanical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
3	<u>WATER PIPE WORK INSTALLATION</u>				
3.1	<u>Water Tanks</u> Supply & install polyethylene water tank (3 layers) or more with all necessary supply and over flow connections all as per the Engineer instructions				
3.1.2	2000 liters PE water tank <i>Rate or Lump Sum in Words:</i>	No			

Carried To Collection

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 663

Part-2 - Mechanical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
5	<u>SANITARY FIXTURES</u>				
5.1	<u>W.C. for Kids</u> Supply and install K.G. W.C. Flush valve with cover as manufactured by Duravit - Bambi No. 018509 or approved equal, or similar to existing, 35 cm height max. from finished floor with timber cover. Cost to include all related connections angle valves and necessary accessories as per the Engineer instructions. Each W.C. should be equipped with a Flushing Hose (Grohe or Ideal standard or approved equal, or similar to existing)				
5.1.1	EWC-03 (Wall Hang - 52 x 32 cm) <i>Rate or Lump Sum in Words:</i>	Nº			
5.2	<u>W.C. For Non Kids</u> Supply and install W.C. for non kids, Flush valve with cover as manufactured by Ideal Standard Item No. E876801 also the hose, or approved equal, or similar to existing, and to be 40 cm from floor finish with timber cover. The work to include the installation, liking, cleaning with all necessary connection, angle valves and necessary accessories similar to the K.G.W.C. Each W.C. should be equipped with a Flushing Hose (Grohe or Ideal standard or approved equal, or similar to existing)				
5.2.1	EWC-01 (Wall Hang - 52 x 36 cm) or as existing <i>Rate or Lump Sum in Words:</i>	Nº			
5.2.3	AWC-01 (Asian water closet) <i>Rate or Lump Sum in Words:</i>	Nº			

Carried To Collection

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 663

Part-2 - Mechanical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
5.3	<u>Lavatories for Kids in the K.G.</u> Supply and install semi pedestal wash basin similar to Ideal Standard No. 742001 or approved equal, or similar to existing, 45 x 36 cm, and fixed at 60 cm high from the floor finish. Cost to include all necessary connections, angle valves and accessories as required				
5.3.1	LAV-03 (semi-pedestal wash basin - 45 x 35 cm) <i>Rate or Lump Sum in Words:</i>	Nº			
5.4	<u>Lavatories for Non Kids</u> Supply and install semi pedestal wash basin similar to Ideal Standard No. 742001 or approved equal, or similar to existing, and fixed at 82 cm high from the floor finish. Cost to include all necessary connections, angle valves, traps and necessary accessories as specified.				
5.4.1	LAV-01 (semi-pedestal with mixers 55 x 45 cm) <i>Rate or Lump Sum in Words:</i>	Nº	1.00		
5.6	<u>Self Close Taps on Kids & Students Lavatories</u> Supply and install self close taps to be fixed in the lavatory body as manufactured by Grohe Item No. 36-173, or similar to existing, with all required works and drain accessories including trap, to be connected to the new water supply and drain and as instructed by the Engineer				
5.6.1	Self Close Taps <i>Rate or Lump Sum in Words:</i>	Nº	6.00		
5.7	<u>Wall Type Self Close Taps on Drinking Basins</u> Supply and install self close taps to be fixed in the drinking basin body as manufactured by Grohe Item No. 36-176, or similar to existing, with all required works and drain accessories including trap and to be connected to the new water supply and drain and as instructed by the Engineer				
5.7.1	Wall Type Self Close Taps <i>Rate or Lump Sum in Words:</i>	Nº	8.00		
Carried To Summary					

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 663

Part-3 - Electrical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
1	<u>BASIC ELECTRICAL REQUIREMENTS</u>				
	The Contractor should revise all the drawings and compare them with the site conditions and redo all the design works with the necessary calculations for all the electrical installations and works. Moreover, the Contractor should submit shop drawings and as-built drawings for the maintenance use in the future. The contractor should provide all the necessary maintenance works for all Electrical systems related to the KG school to ensure its proper works. At the end of the project, the contractor should submit complete As-Built Drawings for all executed works with exact dimensions & sizes for easy maintenance work in the future.				
1.1	<u>Fixing and Repairing</u>				
	Check & repair all the existing cables, wires, socket outlets, lighting fixtures, lighting switches, electric fans, and protect all exposed wiring as per the site conditions, and to the satisfaction of the Engineer. All as per the drawings, specifications and Engineer instructions				
1.1.1	Lighting fixtures	LS	1.00		
	<i>Rate or Lump Sum in Words:</i>				
1.1.2	Wires and cables	LS	1.00		
	<i>Rate or Lump Sum in Words:</i>				
1.1.3	Sockets and switches	LS	1.00		
	<i>Rate or Lump Sum in Words:</i>				
1.1.4	Circuit breakers	LS	1.00		
	<i>Rate or Lump Sum in Words:</i>				
1.1.5	Disconnecting switches	LS	1.00		
	<i>Rate or Lump Sum in Words:</i>				

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 663

Part-3 - Electrical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
1.1.6	Electrical panel boards with grounding <i>Rate or Lump Sum in Words:</i>	LS	1.00		
1.1.9	All needed electrical works ... etc. <i>Rate or Lump Sum in Words:</i>	LS	1.00		

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 663

Part-3 - Electrical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
2	<u>PANELBOARDS</u>				
2.1	Supply, install or rehabilitate the existing panel board if possible including enclosures, busbars, protective devices, MCB & MCCB breakers according to IEC-60947-2 as per the site conditions and Engineer instructions.				
2.1.1	MDB	Nº			
	<i>Rate or Lump Sum in Words:</i>				
					
					

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 663

Part-3 - Electrical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
3	<u>GENERAL LIGHTING INSTALLATIONS</u>				
3.1	<u>Lighting Fixtures</u> Supply, install and test the lighting fixtures complete with all the necessary wires conduits, boxes and accessories required to provide power to each lighting fitting from LP including the earth wire as per the drawings, specifications and Engineer instructions. The Contractor should submit samples of each lighting fixture for approval.				
3.1.1	TYPE C1: Twin T8 LED Tube, surface-mount luminaire for interior, 40W, 4000K, 4700Lm. Polycarbonate, light grey, with injected polyurethane double gasket and clear UV stabilized polycarbonate cover, $\cos \phi \geq 0.9$, or similar to existing.	Nº			
	<i>Rate or Lump Sum in Words:</i>				
3.1.4	TYPE A2 / A3: 600x600 mm LED Panel 3600lm, 33W, 4000K, 80CRI surface-mount/recessed, die-cast aluminum, IP20, or similar to existing.	Nº			
	<i>Rate or Lump Sum in Words:</i>				
3.1.6	TYPE N4 / N3: LED - 900lm - 12.5W - 3000K - 80CRI - WW Surface mounted / Recessed Downlight Round - 120 deg, or similar to existing.	Nº	14.00		
	<i>Rate or Lump Sum in Words:</i>				

Carried To Collection

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 663

Part-3 - Electrical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
10	<u>LIFTS REHABILITATION</u>				
10.1	Rehabilitation of the existing lift as described in specification, including all coordination, design, execution drawing and details, security of the personnel, scaffolding, labor and equipment necessary for the perfect operation of the lift and to the satisfaction of the engineer Cost to include 5 years maintenance contract with all necessary spare parts and all as needed. For 2 hours (fire rated) having the following characteristics: Capacity: as per existing Speed: as per existing Entrance size/ type: as per site dimensions Opening as per existing <i>Rate or Lump Sum in Words:</i> 	No			

Carried To Summary

Bill of Quantities - Lot-3 - School CERD: 1409
Tel Hmeira Mixed Public School

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1409

Summary

<u>Description</u>	<u>Amount (US \$)</u>
Part-1 - Civil, Structural and Architectural Works	
Part-2 - Mechanical Engineering Services	
Part-3 - Electrical Engineering Services	
* Total Amount of Bill of Quantities	
* Discount by Tenderer (_____ %)	
* Total Amount of Tender (VAT Not Applicable)	
* Total Amount of Tender in Words:	
.....	
.....	
.....	

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1409

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
1	<u>SITE PREPARATION AND DEMOLITION</u>				
1.1	<u>Demolishing and Removal of Debris</u>				
1.1.1	The works include all types of demolition and the removal of debris and damaged elements such but not limited to, the following: - Existing plastering and concrete items such as foundations, columns, slabs, etc. - Damaged Tiling (floors and walls) - Toilet fixtures and pipes installation of all sizes - Counter tops, bases and sinks - Water tanks of different types - Hollow concrete block walls or concrete walls of all sizes - Demolition of the existing ramps / Stairs and the execution of the given plans and specifications - Including the necessary equipment for the removal of debris and all resulting materials - etc. <i>Rate or Lump Sum in Words:</i> 	LS	1.00		

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Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
2	<u>SITE PREPARATION AND DEMOLITION</u>				
2.3	<u>Existing Walkways</u>				
2.3.1	Repair existing walkways at project site boundary; precast concrete paver tiles, bases courses, etc., as necessary, where damaged or distributed by new construction without affecting the adjacent undamaged areas; make good and joint at junction with new precast concrete paving and/or curbing as required and to Engineer's approval.	LS			
<i>Rate or Lump Sum in Words:</i>					
2.5	<u>Ramp for External Existing Sidewalk or for accessibility purpose</u>				
2.5.1	Supply and install external pedestrian ramp as per approved shop drawing submitted by contractor Work to include: - Remove parts of sidewalk including curbstone and existing tiles - Remove the debris to outside the site - Submit detailed shop drawing compatible with ADA requirements - Supply and install concrete curbstone for the ramp - Supply and install floor tiles identical to the existing with mortar and all layers - All needed items as per the Engineer instructions	LS	1.00		
<i>Rate or Lump Sum in Words:</i>					
2.9	<u>Rehabilitation of Playground Slabs (External Playground)</u>				
2.9.1	Clean the rehabilitated places by removing all debris and make good all the edges and remove all broken slabs & failed slabs and remove to outside the site all the debris & refused items, cast proper concrete in places where the removal of all debris (No patching is allowed for the existing concrete surfaces) Work to include: - Removal and cleaning the location - Materials, fill - Labors - Make good the surfaces - Lining and marking all playgrounds as per site instructions - All needed refurbishing works as per the Engineer instructions	m ²			
<i>Rate or Lump Sum in Words:</i>					
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Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
3	<u>CONCRETE</u>				
3.2	Reinforced Concrete Footings, Tie Beams, Columns and Walls Drop - Parapete - Slab on Grade				
3.1.2	Supply, cast and vibrate concrete for footing, tie beams, walls, parapets. Up stand, drop parapets with a crushing strength 350kg/cm2, cost to includes: - Formwork - Steel reinforcement - All needed work as per Specifications and the Engineer instructions <i>Rate or Lump Sum in Words:</i>	m3			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
4	<u>MASONRY</u>				
4.1	<u>Hollow or Solid Concrete Blocks and Claustra</u>				
	Supply and install concrete blocks as per drawings				
	Work to include:				
	- All places as per the drawings, and the Engineer instructions.				
	- Materials				
	- Cement mortar and the use of extruded nets and reinforcement by means of metal gates and the placement of angles of galvanized steel iron of concrete columns thickness of 4 mm every 60 cm				
	- Labors and all items needed and instructions by the Engineer				
4.1.2	10 cm hollow concrete blocks	m ²			
	<i>Rate or Lump Sum in Words:</i>				
					
					
4.1.4	15 cm hollow concrete blocks	m ²			
	<i>Rate or Lump Sum in Words:</i>				
					
					

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Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
	<i>From Collection</i>				
4.2	<u>Rehabilitate and Clean masonry walls showing deep crack</u> The repair method requires the replacement of some stone masonry that has been damaged by the crack. It will include the use of horizontal reinforcement. Remove cracked stones in a “toothed” pattern to the extent that a sound repair is possible. Clean the crack if it continues to extend into the mass masonry and grout with non shrink mortar. Key new stone in stone masonry perpendicular to the wall surface in addition to the “toothed” and stepped pattern parallel to the wall surface. With larger more extensive cracks remove additional stones in a stepped pattern on both sides and the top of crack and restore by installing new stones. With smaller repairs lesser amounts of stones will have to be removed. Place horizontal reinforcement every 5th course. Mechanical ties to secure geogrid may be required. The horizontal reinforcement shall bridge over the crack and extend the length of new stone masonry. Replicate the coursing pattern of the existing exposed surface. Place new stones that are not exposed in an alternating stretcher-header bonding pattern to wall surface or top of wall. Construct the new stone masonry in complete horizontal courses where possible. Do not construct more than 5 courses before allowing masonry to dry. Lay subsequent stone courses on fresh wet mortar. Apply mortar at head joints as well as bed joints and finish one-half the width of the mortar joint below the surface of the stones.				
4.2.1	<u>Rehabilitate Natural Stone Facades</u> Rehabilitate works on natural stone facades work should be by replacing the damaged stone and not filling with mortar. Work to include: - Determine location of damaged stone walls and location of dampness. Broken or damaged pieces to be replaced, then cleaning & leveling; without affecting the adjacent undamaged - Treat the dampness and the causes - Repair the stone by renewing the damaged and replace it with new ones with same stone and apply one layer of water proofing transparent paint - Clear the place and infill in between the coarse (Lining) - All works as instructed by the Engineer <i>Rate or Lump Sum in Words:</i> <i>Carried To Collection</i>	m ²			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
	<i>From Collection</i>				
5	<u>METAL WORKS</u>				
5.1	Provide New Steel Work (Door & Windows)				
5.1.1	Provide new steel doors with related accessories as per <i>Rate or Lump Sum in Words:</i>	Nº			
5.1.3	Provide new double glazed aluminum windows with new burglar proof protection <i>Rate or Lump Sum in Words:</i>	Nº			
5.2	<u>Rehabilitate and Maintain the Existing Steel Work (Burglar Proof Protection + Opening)</u> Rehabilitate the existing steel windows or doors as per specifications and drawings and the Engineer instruction Work to include: - Remove all damaged members and replace by new ones - Rub completely to secure all parts and use putty to make faces smooth - Apply two layers of anti rust paint - Apply putty - Apply three layers of epoxy external paint - All needed items as per the Engineer instructions				
5.2.1	Rehabilitate existing steel doors <i>Rate or Lump Sum in Words:</i>	Nº	1.00		
5.2.2	Rehabilitate existing steel gates <i>Rate or Lump Sum in Words:</i>	Nº	2.00		
5.2.4	Rehabilitate existing burglar proof steel protection <i>Rate or Lump Sum in Words:</i>	Nº			
5.2.5	Rehabilitate and paint existing steel louvers with related <i>Rate or Lump Sum in Words:</i>	Nº			
5.2.6	Rehabilitate and paint existing steel window / Curtain Wall <i>Rate or Lump Sum in Words:</i>	Nº			
	<i>Carried To Collection</i>				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
5.3	<u>Rehabilitate Existing Steel Shed Works</u> Rehabilitate the existing steel elements of the existing shed and the work to include: - Remove existing cover (Asbestos, TOT, etc.) and to be dismantled and carted away to outside the site to dumps approved by municipality - Brick tiles to be disassembled and removed and stored in appropriate location as per engineer's instruction and to checked for reused if needed - Clean, rub and repaint all steel structure and do the necessary reinforcement - Damaged steel structure to be replaced with new steel structure similar to existing. - Support and add new beams similar to existing. - Remove existing paint & clean deeply as per SSPC code and ISO 8501 - Apply base and epoxy as specified - Supply the roof covers as per drawings - Install the galvanized steel gutter (No Welded) and all Steel pipe works - Corrugated Metal sheet flashing between walls and shed roof with mastic - All needed items as per the Engineer instructions				
5.3.1	Rehabilitate and strength steel sheds and replace existing sheet by insulated sandwich panel <i>Rate or Lump Sum in Words:</i>	m ²			
5.3.2	Rehabilitate and strength steel sheds and replace existing sheet by polycarbonate triple layer <i>Rate or Lump Sum in Words:</i>	m ²			
5.3.3	Rehabilitate and strength steel sheds and replace existing sheet by insulated sandwich panel with polycarbonate triple layer <i>Rate or Lump Sum in Words:</i>	m ²			
5.3.4	Rehabilitate and strength steel sheds and replace existing sheet by PVC sheet or as exisitng <i>Rate or Lump Sum in Words:</i>	m ²			
<i>Carried To Collection</i>					

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Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
From Collection					
5.3.5	Rehabilitate and strength steel sheds and replace existing sheet by brick tiles <i>Rate or Lump Sum in Words:</i>	m ²			
5.3.6	Rehabilitate and strength existing roof bricks and change broken bricks by new ones <i>Rate or Lump Sum in Words:</i>	m ²			
5.3.7	Rehabilitate connection between wall and corrugated roof, a new gutter to be Provided <i>Rate or Lump Sum in Words:</i>	m			
5.5	<u>Rehabilitate and Maintain Steel Handrail</u> - Rehabilitate the existing metal handrail and remove the damaged members and replace by new - Reinforce the existing handrail with similar members in addition to the rail and all necessary accessories - Remove existing paint & clean deeply as per SSPC code and ISO 8501 - Apply one layer of epoxy base paint - Apply putty - Apply epoxy paint as per specification All needed items as per the Engineer instructions				
5.5.1	Floor Mounted <i>Rate or Lump Sum in Words:</i>	m			
5.5.2	Wall Mounted <i>Rate or Lump Sum in Words:</i>	m			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
6	<u>WOOD AND PLASTICS</u>				
6.1	<u>Joinery Works</u>				
6.1.1	<u>Rehabilitate Existing Kitchen Cupboards</u> Rehabilitate existing cupboards, cabinets, drawers, counters, etc., for the existing kitchen. Works to include replacing damaged elements, accessories, material, labor, equipment, maintaining support, change of the top of counter by new resin counter as specified, etc. As per engineer's approval.				
	- Repair wood elements in accordance with AWI Quality Standards requirements. - Repair framing and sash members with mortise and Tenon joints. Ensure joints and connections are flush, hairline, and weather-tight. - Scarf joints permitted when wood matches in color and grain texture. Form sills and stools in one piece. - Fabricate components with minimum clearances and shim spacing around perimeter of assembly, yet allowing installation and dynamic movement of perimeter seal.				
6.1.1.1	Kitchen Cupboards <i>Rate or Lump Sum in Words:</i>	m			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
7	<u>THERMAL AND MOISTURE PROTECTION</u>				
7.0	<u>Preliminaries</u>				
7.0.2	Dismantle and remove all existing materials on roof: Tiles, Membranes, existing water tanks, Mechanical Pumps and Systems, Electrical Systems, skirting, etc.; and all equipment as per engineer instructions The unwanted/ unused materials should be cart away from the site The remaining items should be reinstalled in a proper way as per engineering instructions <i>Rate or Lump Sum in Words:</i>	LS	1.00		
7.1	<u>Roof Waterproofing</u>				
7.1.1	Works should be applied and done by experts with previous experience in similar works. Works to include: - DEEP cleaning of all surfaces and carting away of dust & - Concrete pad for water tanks as indicated - Sand cement screed layer to Provide proper slopes minimum 0.75% - Expansion joint sealant to be done respecting back rod, unbonding tape, adequate thickness of sealant, type & finish of sealant (fire rated) & design drawings especially on roof & planters. - Provide tackle coat (Proper) - Provide 4mm thick, SBS layer from an approved manufacturer - Provide protection for all pipe works and drains - Provide heat insulation layers of 35 KG/m ³ where required - Provide Geotextile layers - Provide all aluminum flashing with mastic - Provide finishing material as required - All as specified and approved shop drawings <i>Rate or Lump Sum in Words:</i>	m ²			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
8	<u>DOOR AND WINDOWS</u>				
8.1	<u>Wooden Doors and Windows</u>				
	Supply and install all timber work with all related items The joinery works should be of the first class type and as per specifications and drawings Work to include:				
	- Material and labors				
	- All accessories to be heavy duty (Hinged, Lock, Glass vision, as required, etc.)				
	- The frame for any width (Steel, Wood, etc.)				
	- Paint as follows:				
	- Anti rust layers				
	- Putty + one layer of undercoat				
	- Three layers of epoxy paint				
	- Apply and fix 6mm wired clear glass				
	- View Permitting glass opening where needed				
	- remove the existing timber panels				
	- repair the edges				
	- The Contractor should submit shop drawings				
	- All needed items as the Engineer instructions				
8.1.1	<u>Timber Doors</u>				
	Supply and install flush timber door as per drawings with laminated plastic facing and the door should have 10cm width frame between the plywood and fill with timber beads by tongue and groove each 5cm, and the door edges should behead wood and fixed by tongue and groove frames should be as specified, with fixed glass panel vision window, and similar to existing, and to the Engineer's instructions				
	- Works included, all accessories and fittings, pre-painting and finishing paint sides of doors and box frames.				
	- All works should be done as per the Engineer instructions				
8.1.1.1	Provide new double leaf wooden door	N _o			
	<u>Rate or Lump Sum in Words:</u>				
					
8.1.1.2	Provide new single leaf wooden door with view frame	N _o			
	<u>Rate or Lump Sum in Words:</u>				
					

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	<i>From Collection</i>				
8.1.3	<u>Rehabilitate the Existing Timber Doors</u> As stated in the Preambles of Item 8.1 In addition, rehabilitate the existing timber doors: The minimum amount of existing timber should be removed to allow an effective repair to be formed. Cut out deteriorated area of timber in sloping splice to give optimum area of surface to be glued & fixed. Well-seasoned timber to be used in forming a repair with the line and density of grain (number of growth rings) of new timber matching the existing as closely as possible. For all joinery work, timber with shakes, fissures, warping, heartwood, sapwood or numerous/large knots should be avoided for use in repair. Always work new material to the line of the existing and avoid unnecessary trimming of original timber. Repairs should follow any existing deformations in the line of the wood element (e.g. door or window). Avoid mixing timber species between new and existing in a repair as joint between the two is likely to fail from different rates of expansion and contraction during dry & damp conditions. Where possible, spliced repairs to be designed to ensure moisture is towards the outer face of timber and that moisture does not lay on the repair joint. The length of the splice is governed by section of timber and the nature of component being repaired and it should be designed to ensure an effective bond between new and existing sections of timber. Where wood element are to be dismantled as part of the repair process, always mark and record the constituent parts before dismantling. similarly, number of glass panes/quarries before removal. If applicable carefully soften putty or remove wood trim and then remove glass. Use glue, to connect a new outer section of bottom rail to the existing sound timber. Drill and insert new wooden pins or fix using brass screws from inside. Casements or sashes are often in sound condition but the joints have become loose due to the break down of glue and loose wedges. The wedges will often be easily removable and will probably be unsuitable for re-use. It may be for the joints to be pulled together successfully. Attach door frame and shims to perimeter opening to accommodate construction tolerances & all irregularities. Align door plumb and level, free of warp or twist. Maintain dimensional tolerances and alignment with adjacent work. Install operating hardware.				
8.1.3.1.1	Rehabilitate and paint existing single leaf timber doors with related accessories <i>Rate or Lump Sum in Words:</i> <i>Carried To Collection</i>	Nº	29.00		

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<i>From Collection</i>					
8.1.3.1.2	Rehabilitate existing double leaf door <i>Rate or Lump Sum in Words:</i>	Nº			
8.1.3.1.4	Rehabilitate wooden windows <i>Rate or Lump Sum in Words:</i>	Nº			
8.2	<u>Aluminum Doors and Windows</u> Fabricate, supply and install aluminum works as manufactured by SIDEM 2000 first choice with all necessary accessories as per the drawings and the Engineer instructions, cost to include all doors and windows: - Reveals hard stone 3cm thick, all around for external opening - Apply EPDM around door and windows where necessary - Single glass 6 mm - Double glass 6-12-6 mm (Outer Glass should be Tempered) - Hinges and locks - Joint Filler - Mosquito Screen - Mesh - All items needed as per the Engineer instructions - All as specified and base on an approved shop drawings after exact dimensions				
8.2.1	<u>New Aluminum Panels (Double Glass)</u> Supply and install the fabricated aluminum panels with double glass (6 - 12 - 6 mm) (Outer Glass should be Tempered or similar to existing)				
8.2.1.1	Provide new aluminum double glazed window & door panel <i>Rate or Lump Sum in Words:</i>	Nº			
8.2.2	<u>New Aluminum Internal Door</u> Supply and install aluminum door with frame and related strengthening stud, Works to include: Materials, and accessories - Labors - All needed items as per the engineer instructions. - Repair all around the opening				
8.2.2.1	Provide new aluminum partition door as indicated. <i>Rate or Lump Sum in Words:</i>	Nº			
<i>Carried To Collection</i>					

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Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
8.2.3	<u>Rehabilitation Existing Glazed Aluminum Panels (s)</u> Replacing Broken Glass. Fixing Hardware Issues: Check the functionality of latches, hinges, and other hardware. If any parts are broken, replace them with new ones to ensure the window operates smoothly. After repairs, apply a high-quality sealant around the edges to prevent moisture intrusion. If the paint is peeling or faded, consider repainting the frame with a metal paint formulated for aluminum to enhance durability and appearance.				
8.2.3.1	Rehabilitate existing windows, doors and gates	Nº	31.00		
	<i>Rate or Lump Sum in Words:</i>				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
9	<u>FINISHES</u>				
9.1	<u>Cement Plaster</u>				
	Supply and install sand cement plaster on concrete and block wall surfaces as specified The plaster layer should be own a base rough layer The plaster works should be on level points and each point should be at 1.5 m from the second only Work to include: - Materials and accessories (galvanized, wire mesh, cover beds, etc.) - Labors - All addition watering - All tools - Plaster thickness more than 2 cm - All needed items as per drawings and the Engineer instructions				
9.1.1	<u>Internal and External Plaster Works</u>				
9.1.1.1	Supply and apply one layer of sand cement plaster over a rough textured layer of plaster Price included all accessories, material, scaffolding and labor, etc. <i>Rate or Lump Sum in Words:</i>	m ²	40.00		

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Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
From Collection					
9.1.2	Repair of Existing Plaster (Internal - External) (Cracks,				
9.1.2.1	Rehabilitate and repair cracked and damaged plaster indoor and outdoor Work to include: - Determine the location and remove all loose items around the area - Remove the cracked plaster layer - Remove the pulled out layers - Clean the places with suitable materials - Fill all cracks after widening by (No Suggestions) or approved equal. - Remove loose and other deteriorated materials prior to the new repair. Take special care not to damage the adjacent original materials. Prepare mortar joints for installation of lateral reinforcement where it is required. Use thin steel bars to clean joints to maximum depth possible. Remove loose mortar. Mix mortar with minimal amount of water (potable) prior to use. All separation cracks between perpendicular walls shall be filled grout to reduce additional movement from wind loads and thermal expansion-contraction. - Clear debris from crack by probing, brushing, and blowing. - Force non-shrink mortar mixture into crack as deep as possible with hands, wood and metal probes. Use as dry a mix as possible. Use stone bats to fill larger crack voids. Ensure mortar is forced into smaller/deeper cracks. Mortar grout will be fluid in order to flow into crack. Either grout bags or gravity flow shall be used depending on the conditions. Fil Protect repairs from rapid drying by misting, shading, protecting from dry wind cracks in a series of applications rather than one large application. Final application shall not be flush with the surface, but shall be one half the width of the crack below the surface. Remove all tool marks with brush. - Apply the finish rough plaster layer - Install galvanized steel mesh 20 cm width at least - Apply the second smooth plaster layer Rate or Lump Sum in Words:	LS	1.00		
Carried To Collection					

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<i>From Collection</i>					
9.2	<u>Tiling Works</u> Supply and install all tiling items for floors, with the skirting Work to include all materials and labors and the Contractor should use all necessary rods and levels as per the Engineer instructions Price to include: - Sand below tiles - Materials, tiles, mortars - Labors - Rubbing - Filling between tiles - Filling the skirting - Remove unsuitable items - Cleaning the places - All needed items as per the Engineer instructions				
9.2.1	<u>New Full Mass Colored Ceramic for Floors</u> Ceramic tiles and tilework as specified and detailed, installed complete; Including for substrate preparation, cement: sand screeds or plaster backing coats; setting, jointing and grouting; tile trim and accessories; sealants; and all other related ancillaries as indicated or required				
9.2.1.1	Supply and install anti skid colored full mass ceramic tiles for classroom (first choice) for all floor toilets, kitchen and laboratory (existing and new) or similar to existing <i>Rate or Lump Sum in Words:</i> 	m ²	8.00		
9.2.1.2	Skirting same type of floors or similar to existing <i>Rate or Lump Sum in Words:</i> 	m			
9.2.2	<u>New Glazed Colored Ceramic for Walls</u>				
9.2.2.1	Supply and install glazed colored ceramic for walls Include Ceramic Corner (first choice as specified or similar to <i>Rate or Lump Sum in Words:</i> 	m ²			

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<i>From Collection</i>					
9.2.3	<u>New Tiles for stairs</u> Supply and install tiles first choice for the new stair (treads 3cm thick - Risers 2cm thick) and landing - tiling 2cm and for all floors or otherwise specified color type and quality to be submitted for approval, works to include: - Labor, materials and installations - Under tile fill - Mortar - Lining - Step (Tread + riser) and landing and all type of skirting - And needed items to complete the works as per the Engineer instructions				
9.2.3.2	Granite 2cm Thick (Tread and Riser) <i>Rate or Lump Sum in Words:</i>	m			
9.2.3.3	Mosaic Similar to existing 4cm Thick minimum (Tread and Riser) <i>Rate or Lump Sum in Words:</i>	m			
9.2.4	<u>Repair existing broken floor tiles and skirting (all types) and reinstall by new, similar to existing for all rooms and</u> ..				
8.2.4.1	Rehabilitate and repair all damaged and broken tiles, and skirting for any type (marble - ceramic - mosaic - Cement). Remove broken or damaged pieces to be replaced without affecting the adjacent undamaged areas Work to include: - Remove all debris as specified - All materials and labors - Difference tiles (shapes thickness, dimension, pattern) as needed. - Cutting and repair - Grouting - Polish and rubbing - All needed items as per Engineer comments and complete to Engineer approval. <i>Rate or Lump Sum in Words:</i>	LS	1.00		
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<i>From Collection</i>					
9.2.5	<u>Rehabilitate Existing Stair Treads and Riser</u> Remove the broken treads and risers, install and supply new ones similar to the existing with the needed side bases, width as per site dimension with skirting and tiles for landing The work to be as per the Engineer instructions				
9.2.5.1	Existing Mosaic Stair the price including Skirting tiles & Landing <i>Rate or Lump Sum in Words:</i>	m			
9.2.6	<u>Threshold Tiles (Doors, Marble Topping)</u> Supply and install 3cm thick threshold as per the Engineer instructions Cost to include: - Fixing materials - All materials - All labors - All Edges must be rounded or chamfered - All needed items as per the Engineer instructions				
9.2.6.1	Natural Stone Threshold or similar to existing <i>Rate or Lump Sum in Words:</i>	m			
9.2.6.2	Marble Coping or similar to existing <i>Rate or Lump Sum in Words:</i>	m			
9.2.6.3	Natural Stone Coping or similar to existing <i>Rate or Lump Sum in Words:</i>	m			

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Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
9.2.7	<u>Clean and Rub the Existing Floor Tiles and Skirting</u> Rehabilitate any type of flooring tiles and skirting (ceramic - mosaic - etc.) Work to include: - All materials and labors - Grouting - Polish and rubbing - All needed items as per the Engineer instruction as specified				
9.2.7.1	Type 1: Marble or similar to existing <i>Rate or Lump Sum in Words:</i>	m ²			
9.2.7.2	Type 2: Ceramic or similar to existing <i>Rate or Lump Sum in Words:</i>	m ²			
9.2.7.3	Type 3: Mosaic or similar to existing <i>Rate or Lump Sum in Words:</i>	m ²			
9.3	<u>Suspended Ceilings</u> The suspended ceiling, work to include: - All panels - All heavy duty hangers and accessories as specified - Rails (hidden type) - Special metal heavy duty suspension systems - All needed heavy duty accessories and items to complete the works - Works to be indicated on drawings and as per the - Works should be coordinated between the starting and the end of the floor panels and also should be coordinated with the electromechanical units in the ceiling - All works should be as instructed by the Engineer				
9.3.1	<u>Metal Sheet Strips Suspended Ceilings:</u>				
9.3.1.3	Rehabilitate Metal Strips <i>Rate or Lump Sum in Words:</i>	m ²			

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1409

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
9.5	<u>Painting</u>				
9.5.1	<u>Wall and Ceilings Paint Works</u> Wall paint include preparation of the base surfaces to receive the paints and apply the specified layers of putty and paint from the best quality as per specifications and as indicated in drawings The base surfaces should be clean and smooth and free from any pulled out old paints before starting application of the specified primer/undercoat. Apply 2 layers of putty then after smoothening, then 3 layers of the approved paint materials. All works and items should be as per manufacturer recommendation, compatible with each other and as per the Engineer instructions and approval, <i>All paint types must be <u>lead-free</u> and <u>Low VOC</u> (Volatile Organic Compounds)</i>				
9.5.1.2	Super Rubber Paint for old walls and ceilings <i>Rate or Lump Sum in Words:</i>	m ²	1,550.00		
9.5.1.4	Oil Paints for old walls and ceilings <i>Rate or Lump Sum in Words:</i>	m ²	1,485.00		
9.5.2	<u>Outside Walls Paint (Old and New Walls and Ceilings)</u>				
9.5.2.1	Paint for external old and new walls, smooth touch Work to include: - Removal of any paint or obstacle - Rehabilitate the surfaces and make them goods - Polyurethane where needed for cracks - Apply one coat of undercoat - Apply 2 coats of external paint or rolled textured paint - Apply one layer of external transparent paint (acrylic styrene copolymer elastic water proof) - All needed scaffolding and materials for the best execution of the works - All works and items should be as per manufacturer and the Engineer instructions and approval. <i>Rate or Lump Sum in Words:</i>	m ²			

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1409

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
10	<u>SPECIALTIES</u>				
10.1	<u>Bathrooms Accessories</u>				
	- Remove and cart away old damaged fixtures				
	- Supply and install all needed accessories and make good their places and their surroundings				
	- Place all frame, cover joints (stainless steel) anti-corrosion				
	- Install items and their contact with the surfaces				
	- All works should be done as per the Engineer instructions				
10.1.2	<u>Soap Dispenser</u>				
10.1.2.1	Supply and install stainless steel 316 no rust, no stain, soap dispenser wall type fixation (anti-rust materials and accessories) with all needed items or similar to existing				
	All works should be done as the Engineer instructions	No			
	<i>Rate or Lump Sum in Words:</i>				
					
10.1.4	<u>Mirror for Lavatories</u>				
	Supply and install 6mm glass mirror for lavatories with colored PVC frames as show on drawings and as stated in the specifications with all needed items and accessories or similar to existing				
	The mirror should be placed on 3mm thick plywood from the back				
	All works should be done as the Engineer instructions				
10.1.4.1	Mirror (Dimension as per site conditions and engineer instruction)	No			
	<i>Rate or Lump Sum in Words:</i>				
					

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1409

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
10.3	<u>Resin Work</u>				
10.3.1	<u>Drinking Basin</u>				
	Supply and install drinking basin as shown on drawings of resin layers 12 mm thick fixed on galvanized steel skeleton 4 x 4 cm hollow sections and as shown on drawings				
	Work to include:				
	- Materials				
	- Labors				
	- Galvanized steel skeleton				
	- All needed items and as instructed by the Engineer				
10.3.1.1	Drinking Basin -Length (up to 2.20 m)	Nº			
	<i>Rate or Lump Sum in Words:</i>				
					
10.3.1.5	Drinking Basin -Length (3.81 to 4.10 m)	Nº			
	<i>Rate or Lump Sum in Words:</i>				
					
10.3.1.6	Drinking Basin -Length (4.11 to 6.20 m)	Nº			
	<i>Rate or Lump Sum in Words:</i>				
					
10.3.2	<u>Lavatory Countertop</u>				
10.3.2.1	Supply and install complete counter for lavatories in toilets where shown on drawings to be of 12mm resin layer as per drawings and the work to include:				
	- All fixing elements				
	- All stainless steel hangers				
	- All necessary heavy duty accessories				
	- Counter edge of 30cm length				
	- All needed items and as instructed by the Engineer	m			
	<i>Rate or Lump Sum in Words:</i>				
					

Carried To Collection

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1409

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
	<i>From Collection</i>				
10.3.4	<u>Kitchen Counter</u>				
	Supply and install complete counter resin type with sink (resin) for teachers' kitchen of 18mm thick including coved splash back 20cm height and the work to include:				
	- All fixing elements				
	- All stainless steel hangers				
	- All necessary accessories				
	- All needed items and as instructed by the Engineer				
10.3.4.2	Kitchen Counter - Length (1.11 to 1.75m)	No			
	<u>Rate or Lump Sum in Words:</u>				
10.8	<u>Complete Accessible Toilet</u>				
10.8.1	Supply, construct, install, test and commission one complete accessible toilet, including all necessary civil, architectural, plumbing and ventilation works, fully coordinated and ready for use. The item shall include, but not be limited to, hollow concrete block walls, cement plaster and painting, ceramic floor and wall tiles, PU waterproofing, complete water supply piping and connections, complete drainage piping and connections, accessible WC and washbasin/lavatory, all required sanitary fittings and accessories, grab bars and other accessibility provisions, ventilation system, and external-grade plastic laminate door with all required ironmongery and fittings.				
	The Contractor shall verify all dimensions, levels, access requirements and existing site conditions prior to commencement of works and shall ensure that the toilet dimensions and layout comply with applicable accessibility requirements and are suitably adapted to the actual location and site constraints.				
	The Contractor shall prepare and submit complete coordinated shop drawings, including plans, sections, elevations, dimensions, sanitary and plumbing layouts, accessibility provisions, door details and all relevant details, for the Engineer's review and approval prior to execution. The rate shall include all materials, labour, fittings, supports, connections, testing, making good and all other incidental works necessary to provide a complete, functional and fully operational accessible toilet in accordance with the approved shop drawings, Drawings, Specifications, accessibility requirements and applicable standards				
	- Complete Accessible Toilet	item	1.00		
	<u>Rate or Lump Sum in Words:</u>				

Carried To Summary

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1409

Part-2 - Mechanical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
1	<u>GENERAL TECHNICAL REQUIREMENTS</u>				
1.1	<u>General Mechanical Requirements</u>				
1.1.2	Prepare the shop drawings for all mechanical works (where needed) and obtain approval from the Engineer before the start of executing any work. <i>Rate or Lump Sum in Words:</i>	Item	1.00		
1.2	<u>Rehabilitation Works General Requirements</u> Provide all necessary rehabilitation works and make all Mechanical systems in good condition complete including maintenance, cleaning, relocation works, replacing damaged items and equipment, removing and carting away resulting materials and equipment, testing and commissioning, and all other related works to ensure all Mechanical systems are properly working and functional.				
1.2.1	Maintenance and rehabilitation of existing plumbing works, including sanitary fixtures, changing Wc Covers, floor drains, roof drains, manholes, pumps, WC tanks, adding where applicable all necessary valves, flush valves, Traps, Elbow ...etc. removing newly installed showers, and all other necessary works. <i>Rate or Lump Sum in Words:</i>	Item	1.00		

Carried To Collection

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1409

Part-2 - Mechanical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
2	<u>SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION</u>				
2.1	<u>Drainage System</u> Supply, install and test the storm water drainage from (UPVC) pipes inside the building to outside and the pipes to be measured in Linear Meter with all related accessories, cleanout, elbows, vent hangers, and all necessary accessories as per standard installation details				
2.1.1	Ø 50 mm / UPVC <i>Rate or Lump Sum in Words:</i>	m			
2.1.2	Ø 75 mm / UPVC <i>Rate or Lump Sum in Words:</i>	m			
2.1.3	Ø 110 mm / UPVC <i>Rate or Lump Sum in Words:</i>	m			
2.2	<u>Floor Drain</u> Supply and install floor drain P.V.C. with chrome plated brass drain cover and to be the same level as the floor and do all necessary installation and connections. This includes all civil works and connection to the proper floor pipes and as per the Engineer instructions				
2.2.1	FD-01: Ø75 mm bottom outlet <i>Rate or Lump Sum in Words:</i>	Nº			
2.3	<u>Drain Cover</u> Supply and install floor drain cover (P.E) or (similar to existing) 5 mm thick on drainage pipe and to be the same level of the floor tiling. Work to include all civil works and as per the				
2.3.1	Cover for FCO <i>Rate or Lump Sum in Words:</i>	Nº			

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1409

Part-2 - Mechanical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
3	<u>WATER PIPE WORK INSTALLATION</u>				
3.1	<u>Water Tanks</u> Supply & install polyethylene water tank (3 layers) or more with all necessary supply and over flow connections all as per the Engineer instructions				
3.1.2	2000 liters PE water tank <i>Rate or Lump Sum in Words:</i>	No			

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1409

Part-2 - Mechanical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
5	<u>SANITARY FIXTURES</u>				
5.1	<u>W.C. for Kids</u> Supply and install K.G. W.C. Flush valve with cover as manufactured by Duravit - Bambi No. 018509 or approved equal, or similar to existing, 35 cm height max. from finished floor with timber cover. Cost to include all related connections angle valves and necessary accessories as per the Engineer instructions. Each W.C. should be equipped with a Flushing Hose (Grohe or Ideal standard or approved equal, or similar to existing)				
5.1.1	EWC-03 (Wall Hang - 52 x 32 cm) <i>Rate or Lump Sum in Words:</i>	Nº			
5.2	<u>W.C. For Non Kids</u> Supply and install W.C. for non kids, Flush valve with cover as manufactured by Ideal Standard Item No. E876801 also the hose, or approved equal, or similar to existing, and to be 40 cm from floor finish with timber cover. The work to include the installation, liking, cleaning with all necessary connection, angle valves and necessary accessories similar to the K.G.W.C. Each W.C. should be equipped with a Flushing Hose (Grohe or Ideal standard or approved equal, or similar to existing)				
5.2.1	EWC-01 (Wall Hang - 52 x 36 cm) or as existing <i>Rate or Lump Sum in Words:</i>	Nº	7.00		
5.2.3	AWC-01 (Asian water closet) <i>Rate or Lump Sum in Words:</i>	Nº			

Carried To Collection

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1409

Part-2 - Mechanical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
5.3	<u>Lavatories for Kids in the K.G.</u> Supply and install semi pedestal wash basin similar to Ideal Standard No. 742001 or approved equal, or similar to existing, 45 x 36 cm, and fixed at 60 cm high from the floor finish. Cost to include all necessary connections, angle valves and accessories as required				
5.3.1	LAV-03 (semi-pedestal wash basin - 45 x 35 cm) <i>Rate or Lump Sum in Words:</i>	Nº			
5.4	<u>Lavatories for Non Kids</u> Supply and install semi pedestal wash basin similar to Ideal Standard No. 742001 or approved equal, or similar to existing, and fixed at 82 cm high from the floor finish. Cost to include all necessary connections, angle valves, traps and necessary accessories as specified.				
5.4.1	LAV-01 (semi-pedestal with mixers 55 x 45 cm) <i>Rate or Lump Sum in Words:</i>	Nº	4.00		
5.6	<u>Self Close Taps on Kids & Students Lavatories</u> Supply and install self close taps to be fixed in the lavatory body as manufactured by Grohe Item No. 36-173, or similar to existing, with all required works and drain accessories including trap, to be connected to the new water supply and drain and as instructed by the Engineer				
5.6.1	Self Close Taps <i>Rate or Lump Sum in Words:</i>	Nº	12.00		
5.7	<u>Wall Type Self Close Taps on Drinking Basins</u> Supply and install self close taps to be fixed in the drinking basin body as manufactured by Grohe Item No. 36-176, or similar to existing, with all required works and drain accessories including trap and to be connected to the new water supply and drain and as instructed by the Engineer				
5.7.1	Wall Type Self Close Taps <i>Rate or Lump Sum in Words:</i>	Nº	17.00		
Carried To Summary					

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1409

Part-3 - Electrical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
1	<u>BASIC ELECTRICAL REQUIREMENTS</u>				
	The Contractor should revise all the drawings and compare them with the site conditions and redo all the design works with the necessary calculations for all the electrical installations and works. Moreover, the Contractor should submit shop drawings and as-built drawings for the maintenance use in the future. The contractor should provide all the necessary maintenance works for all Electrical systems related to the KG school to ensure its proper works. At the end of the project, the contractor should submit complete As-Built Drawings for all executed works with exact dimensions & sizes for easy maintenance work in the future.				
1.1	<u>Fixing and Repairing</u>				
	Check & repair all the existing cables, wires, socket outlets, lighting fixtures, lighting switches, electric fans, and protect all exposed wiring as per the site conditions, and to the satisfaction of the Engineer. All as per the drawings, specifications and Engineer instructions				
1.1.1	Lighting fixtures	LS	1.00		
	<i>Rate or Lump Sum in Words:</i>				
1.1.2	Wires and cables	LS	1.00		
	<i>Rate or Lump Sum in Words:</i>				
1.1.3	Sockets and switches	LS	1.00		
	<i>Rate or Lump Sum in Words:</i>				
1.1.4	Circuit breakers	LS	1.00		
	<i>Rate or Lump Sum in Words:</i>				
1.1.5	Disconnecting switches	LS	1.00		
	<i>Rate or Lump Sum in Words:</i>				

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1409

Part-3 - Electrical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
1.1.6	Electrical panel boards with grounding <i>Rate or Lump Sum in Words:</i>	LS	1.00		
1.1.9	All needed electrical works ... etc. <i>Rate or Lump Sum in Words:</i>	LS	1.00		

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1409

Part-3 - Electrical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
2	<u>PANELBOARDS</u>				
2.1	Supply, install or rehabilitate the existing panel board if possible including enclosures, busbars, protective devices, MCB & MCCB breakers according to IEC-60947-2 as per the site conditions and Engineer instructions.				
2.1.1	MDB	Nº			
	<i>Rate or Lump Sum in Words:</i>				
					
					

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1409

Part-3 - Electrical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
3	<u>GENERAL LIGHTING INSTALLATIONS</u>				
3.1	<u>Lighting Fixtures</u> Supply, install and test the lighting fixtures complete with all the necessary wires conduits, boxes and accessories required to provide power to each lighting fitting from LP including the earth wire as per the drawings, specifications and Engineer instructions. The Contractor should submit samples of each lighting fixture for approval.				
3.1.1	TYPE C1: Twin T8 LED Tube, surface-mount luminaire for interior, 40W, 4000K, 4700Lm. Polycarbonate, light grey, with injected polyurethane double gasket and clear UV stabilized polycarbonate cover, $\cos \phi \geq 0.9$, or similar to existing.	Nº	25.00		
	<i>Rate or Lump Sum in Words:</i>				
3.1.4	TYPE A2 / A3: 600x600 mm LED Panel 3600lm, 33W, 4000K, 80CRI surface-mount/recessed, die-cast aluminum, IP20, or similar to existing.	Nº			
	<i>Rate or Lump Sum in Words:</i>				
3.1.6	TYPE N4 / N3: LED - 900lm - 12.5W - 3000K - 80CRI - WW Surface mounted / Recessed Downlight Round - 120 deg, or similar to existing.	Nº			
	<i>Rate or Lump Sum in Words:</i>				

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1409

Part-3 - Electrical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
10	<u>LIFTS REHABILITATION</u>				
10.1	Rehabilitation of the existing lift as described in specification, including all coordination, design, execution drawing and details, security of the personnel, scaffolding, labor and equipment necessary for the perfect operation of the lift and to the satisfaction of the engineer				
	Cost to include 5 years maintenance contract with all necessary spare parts and all as needed.				
	For 2 hours (fire rated) having the following characteristics:				
	Capacity: as per existing				
	Speed: as per existing				
	Entrance size/ type: as per site dimensions				
	Opening as per existing	No			
	<u>Rate or Lump Sum in Words:</u>				
					
					

Carried To Summary

Bill of Quantities - Lot-3 - School CERD: 1459
El Amayer Public School

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1459

Summary

<u>Description</u>	<u>Amount (US \$)</u>
Part-1 - Civil, Structural and Architectural Works	
Part-2 - Mechanical Engineering Services	
Part-3 - Electrical Engineering Services	
* Total Amount of Bill of Quantities	
* Discount by Tenderer (_____ %)	
* Total Amount of Tender (VAT Not Applicable)	
* Total Amount of Tender in Words:	
.....	
.....	
.....	

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1459

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
1	<u>SITE PREPARATION AND DEMOLITION</u>				
1.1	<u>Demolishing and Removal of Debris</u>				
1.1.1	The works include all types of demolition and the removal of debris and damaged elements such but not limited to, the following: - Existing plastering and concrete items such as foundations, columns, slabs, etc. - Damaged Tiling (floors and walls) - Toilet fixtures and pipes installation of all sizes - Counter tops, bases and sinks - Water tanks of different types - Hollow concrete block walls or concrete walls of all sizes - Demolition of the existing ramps / Stairs and the execution of the given plans and specifications - Including the necessary equipment for the removal of debris and all resulting materials - etc.	LS	1.00		
	<u>Rate or Lump Sum in Words:</u>				

Carried To Collection

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1459

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
2	<u>SITE PREPARATION AND DEMOLITION</u>				
2.3	<u>Existing Walkways</u>				
2.3.1	Repair existing walkways at project site boundary; precast concrete paver tiles, bases courses, etc., as necessary, where damaged or distributed by new construction without affecting the adjacent undamaged areas; make good and joint at junction with new precast concrete paving and/or curbing as required and to Engineer's approval.	LS			
	<i>Rate or Lump Sum in Words:</i>				
2.5	<u>Ramp for External Existing Sidewalk or for accessibility purpose</u>				
2.5.1	Supply and install external pedestrian ramp as per approved shop drawing submitted by contractor Work to include: - Remove parts of sidewalk including curbstone and existing tiles - Remove the debris to outside the site - Submit detailed shop drawing compatible with ADA requirements - Supply and install concrete curbstone for the ramp - Supply and install floor tiles identical to the existing with mortar and all layers - All needed items as per the Engineer instructions	LS			
	<i>Rate or Lump Sum in Words:</i>				
2.9	<u>Rehabilitation of Playground Slabs (External Playground)</u>				
2.9.1	Clean the rehabilitated places by removing all debris and make good all the edges and remove all broken slabs & failed slabs and remove to outside the site all the debris & refused items, cast proper concrete in places where the removal of all debris (No patching is allowed for the existing concrete surfaces) Work to include: - Removal and cleaning the location - Materials, fill - Labors - Make good the surfaces - Lining and marking all playgrounds as per site instructions - All needed refurbishing works as per the Engineer instructions	m ²			
	<i>Rate or Lump Sum in Words:</i>				
<i>Carried To Collection</i>					

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1459

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
3	<u>CONCRETE</u>				
3.2	Reinforced Concrete Footings, Tie Beams, Columns and Walls Drop - Parapete - Slab on Grade				
3.1.2	Supply, cast and vibrate concrete for footing, tie beams, walls, parapets. Up stand, drop parapets with a crushing strength 350kg/cm2, cost to includes: - Formwork - Steel reinforcement - All needed work as per Specifications and the Engineer instructions <i>Rate or Lump Sum in Words:</i>	m3			

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1459

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
4	<u>MASONRY</u>				
4.1	<u>Hollow or Solid Concrete Blocks and Claustra</u> Supply and install concrete blocks as per drawings Work to include: - All places as per the drawings, and the Engineer instructions. - Materials - Cement mortar and the use of extruded nets and reinforcement by means of metal gates and the placement of angles of galvanized steel iron of concrete columns thickness of 4 mm every 60 cm - Labors and all items needed and instructions by the Engineer				
4.1.2	10 cm hollow concrete blocks <i>Rate or Lump Sum in Words:</i>	m ²			
4.1.4	15 cm hollow concrete blocks <i>Rate or Lump Sum in Words:</i>	m ²			

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1459

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
	<i>From Collection</i>				
4.2	<u>Rehabilitate and Clean masonry walls showing deep crack</u> The repair method requires the replacement of some stone masonry that has been damaged by the crack. It will include the use of horizontal reinforcement. Remove cracked stones in a “toothed” pattern to the extent that a sound repair is possible. Clean the crack if it continues to extend into the mass masonry and grout with non shrink mortar. Key new stone in stone masonry perpendicular to the wall surface in addition to the “toothed” and stepped pattern parallel to the wall surface. With larger more extensive cracks remove additional stones in a stepped pattern on both sides and the top of crack and restore by installing new stones. With smaller repairs lesser amounts of stones will have to be removed. Place horizontal reinforcement every 5th course. Mechanical ties to secure geogrid may be required. The horizontal reinforcement shall bridge over the crack and extend the length of new stone masonry. Replicate the coursing pattern of the existing exposed surface. Place new stones that are not exposed in an alternating stretcher-header bonding pattern to wall surface or top of wall. Construct the new stone masonry in complete horizontal courses where possible. Do not construct more than 5 courses before allowing masonry to dry. Lay subsequent stone courses on fresh wet mortar. Apply mortar at head joints as well as bed joints and finish one-half the width of the mortar joint below the surface of the stones.				
4.2.1	<u>Rehabilitate Natural Stone Facades</u> Rehabilitate works on natural stone facades work should be by replacing the damaged stone and not filling with mortar. Work to include: - Determine location of damaged stone walls and location of dampness. Broken or damaged pieces to be replaced, then cleaning & leveling; without affecting the adjacent undamaged - Treat the dampness and the causes - Repair the stone by renewing the damaged and replace it with new ones with same stone and apply one layer of water proofing transparent paint - Clear the place and infill in between the coarse (Lining) - All works as instructed by the Engineer <i>Rate or Lump Sum in Words:</i>	m ²			
	<i>Carried To Collection</i>				

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1459

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
	<i>From Collection</i>				
5	<u>METAL WORKS</u>				
5.1	Provide New Steel Work (Door & Windows)				
5.1.1	Provide new steel doors with related accessories as per <i>Rate or Lump Sum in Words:</i>	Nº			
5.1.3	Provide new double glazed aluminum windows with new burglar proof protection <i>Rate or Lump Sum in Words:</i>	Nº	1.00		
5.2	<u>Rehabilitate and Maintain the Existing Steel Work (Burglar Proof Protection + Opening)</u> Rehabilitate the existing steel windows or doors as per specifications and drawings and the Engineer instruction Work to include: - Remove all damaged members and replace by new ones - Rub completely to secure all parts and use putty to make faces smooth - Apply two layers of anti rust paint - Apply putty - Apply three layers of epoxy external paint - All needed items as per the Engineer instructions				
5.2.1	Rehabilitate existing steel doors <i>Rate or Lump Sum in Words:</i>	Nº	7.00		
5.2.2	Rehabilitate existing steel gates <i>Rate or Lump Sum in Words:</i>	Nº	2.00		
5.2.4	Rehabilitate existing burglar proof steel protection <i>Rate or Lump Sum in Words:</i>	Nº			
5.2.5	Rehabilitate and paint existing steel louvers with related <i>Rate or Lump Sum in Words:</i>	Nº			
5.2.6	Rehabilitate and paint existing steel window / Curtain Wall <i>Rate or Lump Sum in Words:</i>	Nº			
	<i>Carried To Collection</i>				

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Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
5.3	<u>Rehabilitate Existing Steel Shed Works</u> Rehabilitate the existing steel elements of the existing shed and the work to include: - Remove existing cover (Asbestos, TOT, etc.) and to be dismantled and carted away to outside the site to dumps approved by municipality - Brick tiles to be disassembled and removed and stored in appropriate location as per engineer's instruction and to checked for reused if needed - Clean, rub and repaint all steel structure and do the necessary reinforcement - Damaged steel structure to be replaced with new steel structure similar to existing. - Support and add new beams similar to existing. - Remove existing paint & clean deeply as per SSPC code and ISO 8501 - Apply base and epoxy as specified - Supply the roof covers as per drawings - Install the galvanized steel gutter (No Welded) and all Steel pipe works - Corrugated Metal sheet flashing between walls and shed roof with mastic - All needed items as per the Engineer instructions				
5.3.1	Rehabilitate and strength steel sheds and replace existing sheet by insulated sandwich panel <i>Rate or Lump Sum in Words:</i>	m ²			
5.3.2	Rehabilitate and strength steel sheds and replace existing sheet by polycarbonate triple layer <i>Rate or Lump Sum in Words:</i>	m ²			
5.3.3	Rehabilitate and strength steel sheds and replace existing sheet by insulated sandwich panel with polycarbonate triple layer <i>Rate or Lump Sum in Words:</i>	m ²			
5.3.4	Rehabilitate and strength steel sheds and replace existing sheet by PVC sheet or as exisitng <i>Rate or Lump Sum in Words:</i>	m ²			
<i>Carried To Collection</i>					

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Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
5.3.5	Rehabilitate and strength steel sheds and replace existing sheet by brick tiles <i>Rate or Lump Sum in Words:</i>	m ²			
5.3.6	Rehabilitate and strength existing roof bricks and change broken bricks by new ones <i>Rate or Lump Sum in Words:</i>	m ²			
5.3.7	Rehabilitate connection between wall and corrugated roof, a new gutter to be Provided <i>Rate or Lump Sum in Words:</i>	m			
5.5	<u>Rehabilitate and Maintain Steel Handrail</u> - Rehabilitate the existing metal handrail and remove the damaged members and replace by new - Reinforce the existing handrail with similar members in addition to the rail and all necessary accessories - Remove existing paint & clean deeply as per SSPC code and ISO 8501 - Apply one layer of epoxy base paint - Apply putty - Apply epoxy paint as per specification All needed items as per the Engineer instructions				
5.5.1	Floor Mounted <i>Rate or Lump Sum in Words:</i>	m			
5.5.2	Wall Mounted <i>Rate or Lump Sum in Words:</i>	m			

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Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
6	<u>WOOD AND PLASTICS</u>				
6.1	<u>Joinery Works</u>				
6.1.1	<u>Rehabilitate Existing Kitchen Cupboards</u> Rehabilitate existing cupboards, cabinets, drawers, counters, etc., for the existing kitchen. Works to include replacing damaged elements, accessories, material, labor, equipment, maintaining support, change of the top of counter by new resin counter as specified, etc. As per engineer's approval.				
	- Repair wood elements in accordance with AWI Quality Standards requirements. - Repair framing and sash members with mortise and Tenon joints. Ensure joints and connections are flush, hairline, and weather-tight. - Scarf joints permitted when wood matches in color and grain texture. Form sills and stools in one piece. - Fabricate components with minimum clearances and shim spacing around perimeter of assembly, yet allowing installation and dynamic movement of perimeter seal.				
6.1.1.1	Kitchen Cupboards <i>Rate or Lump Sum in Words:</i>	m			

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Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
7	<u>THERMAL AND MOISTURE PROTECTION</u>				
7.0	<u>Preliminaries</u>				
7.0.2	Dismantle and remove all existing materials on roof: Tiles, Membranes, existing water tanks, Mechanical Pumps and Systems, Electrical Systems, skirting, etc.; and all equipment as per engineer instructions The unwanted/ unused materials should be cart away from the site The remaining items should be reinstalled in a proper way as per engineering instructions <i>Rate or Lump Sum in Words:</i>	LS	1.00		
7.1	<u>Roof Waterproofing</u>				
7.1.1	Works should be applied and done by experts with previous experience in similar works. Works to include: - DEEP cleaning of all surfaces and carting away of dust & - Concrete pad for water tanks as indicated - Sand cement screed layer to Provide proper slopes minimum 0.75% - Expansion joint sealant to be done respecting back rod, un-bonding tape, adequate thickness of sealant, type & finish of sealant (fire rated) & design drawings especially on roof & planters. - Provide tackle coat (Proper) - Provide 4mm thick, SBS layer from an approved manufacturer - Provide protection for all pipe works and drains - Provide heat insulation layers of 35 KG/m ³ where required - Provide Geotextile layers - Provide all aluminum flashing with mastic - Provide finishing material as required - All as specified and approved shop drawings <i>Rate or Lump Sum in Words:</i>	m ²	10.00		

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Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
8	<u>DOOR AND WINDOWS</u>				
8.1	<u>Wooden Doors and Windows</u> Supply and install all timber work with all related items The joinery works should be of the first class type and as per specifications and drawings Work to include: - Material and labors - All accessories to be heavy duty (Hinged, Lock, Glass vision, as required, etc.) - The frame for any width (Steel, Wood, etc.) - Paint as follows: - Anti rust layers - Putty + one layer of undercoat - Three layers of epoxy paint - Apply and fix 6mm wired clear glass - View Permitting glass opening where needed - remove the existing timber panels - repair the edges - The Contractor should submit shop drawings - All needed items as the Engineer instructions				
8.1.1	<u>Timber Doors</u> Supply and install flush timber door as per drawings with laminated plastic facing and the door should have 10cm width frame between the plywood and fill with timber beads by tongue and groove each 5cm, and the door edges should behead wood and fixed by tongue and groove frames should be as specified, with fixed glass panel vision window, and similar to existing, and to the Engineer's instructions - Works included, all accessories and fittings, pre-painting and finishing paint sides of doors and box frames. - All works should be done as per the Engineer instructions				
8.1.1.1	Provide new double leaf wooden door <i>Rate or Lump Sum in Words:</i>	Nº			
8.1.1.2	Provide new single leaf wooden door with view frame <i>Rate or Lump Sum in Words:</i>	Nº			

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Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
	<i>From Collection</i>				
8.1.3	<u>Rehabilitate the Existing Timber Doors</u> As stated in the Preambles of Item 8.1 In addition, rehabilitate the existing timber doors: The minimum amount of existing timber should be removed to allow an effective repair to be formed. Cut out deteriorated area of timber in sloping splice to give optimum area of surface to be glued & fixed. Well-seasoned timber to be used in forming a repair with the line and density of grain (number of growth rings) of new timber matching the existing as closely as possible. For all joinery work, timber with shakes, fissures, warping, heartwood, sapwood or numerous/large knots should be avoided for use in repair. Always work new material to the line of the existing and avoid unnecessary trimming of original timber. Repairs should follow any existing deformations in the line of the wood element (e.g. door or window). Avoid mixing timber species between new and existing in a repair as joint between the two is likely to fail from different rates of expansion and contraction during dry & damp conditions. Where possible, spliced repairs to be designed to ensure moisture is towards the outer face of timber and that moisture does not lay on the repair joint. The length of the splice is governed by section of timber and the nature of component being repaired and it should be designed to ensure an effective bond between new and existing sections of timber. Where wood element are to be dismantled as part of the repair process, always mark and record the constituent parts before dismantling, similarly, number of glass panes/quarries before removal. If applicable carefully soften putty or remove wood trim and then remove glass. Use glue, to connect a new outer section of bottom rail to the existing sound timber. Drill and insert new wooden pins or fix using brass screws from inside. Casements or sashes are often in sound condition but the joints have become loose due to the break down of glue and loose wedges. The wedges will often be easily removable and will probably be unsuitable for re-use. It may be for the joints to be pulled together successfully. Attach door frame and shims to perimeter opening to accommodate construction tolerances & all irregularities. Align door plumb and level, free of warp or twist. Maintain dimensional tolerances and alignment with adjacent work. Install operating hardware.				
8.1.3.1.1	Rehabilitate and paint existing single leaf timber doors with related accessories <i>Rate or Lump Sum in Words:</i> <i>Carried To Collection</i>	Nº	16.00		

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Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
8.1.3.1.2	Rehabilitate existing double leaf door <i>Rate or Lump Sum in Words:</i>	Nº			
8.1.3.1.4	Rehabilitate wooden windows <i>Rate or Lump Sum in Words:</i>	Nº			
8.2	<u>Aluminum Doors and Windows</u> Fabricate, supply and install aluminum works as manufactured by SIDEM 2000 first choice with all necessary accessories as per the drawings and the Engineer instructions, cost to include all doors and windows: - Reveals hard stone 3cm thick, all around for external opening - Apply EPDM around door and windows where necessary - Single glass 6 mm - Double glass 6-12-6 mm (Outer Glass should be Tempered) - Hinges and locks - Joint Filler - Mosquito Screen - Mesh - All items needed as per the Engineer instructions - All as specified and base on an approved shop drawings after exact dimensions				
8.2.1	<u>New Aluminum Panels (Double Glass)</u> Supply and install the fabricated aluminum panels with double glass (6 - 12 - 6 mm) (Outer Glass should be Tempered or similar to existing)				
8.2.1.1	Provide new aluminum double glazed window & door panel <i>Rate or Lump Sum in Words:</i>	Nº			
8.2.2	<u>New Aluminum Internal Door</u> Supply and install aluminum door with frame and related strengthening stud, Works to include: Materials, and accessories - Labors - All needed items as per the engineer instructions. - Repair all around the opening				
8.2.2.1	Provide new aluminum partition door as indicated. <i>Rate or Lump Sum in Words:</i>	Nº			
<i>Carried To Collection</i>					

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Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
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From Collection

- 8.2.3 Rehabilitation Existing Glazed Aluminum Panels (s)**
Replacing Broken Glass. Fixing Hardware Issues: Check the functionality of latches, hinges, and other hardware. If any parts are broken, replace them with new ones to ensure the window operates smoothly. After repairs, apply a high-quality sealant around the edges to prevent moisture intrusion. If the paint is peeling or faded, consider repainting the frame with a metal paint formulated for aluminum to enhance durability and appearance.

8.2.3.1	Rehabilitate existing windows, doors and gates	Nº	22.00		
	<u>Rate or Lump Sum in Words:</u>				
					

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Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
9	<u>FINISHES</u>				
9.1	<u>Cement Plaster</u>				
	Supply and install sand cement plaster on concrete and block wall surfaces as specified				
	The plaster layer should be own a base rough layer				
	The plaster works should be on level points and each point should be at 1.5 m from the second only				
	Work to include:				
	- Materials and accessories (galvanized, wire mesh, cover beds, etc.)				
	- Labors				
	- All addition watering				
	- All tools				
	- Plaster thickness more than 2 cm				
	- All needed items as per drawings and the Engineer instructions				
9.1.1	<u>Internal and External Plaster Works</u>				
9.1.1.1	Supply and apply one layer of sand cement plaster over a rough textured layer of plaster				
	Price included all accessories, material, scaffolding and labor, etc.	m ²			
	<u>Rate or Lump Sum in Words:</u>				
					
					

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Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
From Collection					
9.1.2	<u>Repair of Existing Plaster (Internal - External) (Cracks,</u>				
9.1.2.1	Rehabilitate and repair cracked and damaged plaster indoor and outdoor Work to include: - Determine the location and remove all loose items around the area - Remove the cracked plaster layer - Remove the pulled out layers - Clean the places with suitable materials - Fill all cracks after widening by (No Suggestions) or approved equal. - Remove loose and other deteriorated materials prior to the new repair. Take special care not to damage the adjacent original materials. Prepare mortar joints for installation of lateral reinforcement where it is required. Use thin steel bars to clean joints to maximum depth possible. Remove loose mortar. Mix mortar with minimal amount of water (potable) prior to use. All separation cracks between perpendicular walls shall be filled grout to reduce additional movement from wind loads and thermal expansion-contraction. - Clear debris from crack by probing, brushing, and blowing. - Force non-shrink mortar mixture into crack as deep as possible with hands, wood and metal probes. Use as dry a mix as possible. Use stone bats to fill larger crack voids. Ensure mortar is forced into smaller/deeper cracks. Mortar grout will be fluid in order to flow into crack. Either grout bags or gravity flow shall be used depending on the conditions. Fil Protect repairs from rapid drying by misting, shading, protecting from dry wind cracks in a series of applications rather than one large application. Final application shall not be flush with the surface, but shall be one half the width of the crack below the surface. Remove all tool marks with brush. - Apply the finish rough plaster layer - Install galvanized steel mesh 20 cm width at least - Apply the second smooth plaster layer Rate or Lump Sum in Words: 	LS	1.00		
Carried To Collection					

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Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
9.2	<u>Tiling Works</u> Supply and install all tiling items for floors, with the skirting Work to include all materials and labors and the Contractor should use all necessary rods and levels as per the Engineer instructions Price to include: - Sand below tiles - Materials, tiles, mortars - Labors - Rubbing - Filling between tiles - Filling the skirting - Remove unsuitable items - Cleaning the places - All needed items as per the Engineer instructions				
9.2.1	<u>New Full Mass Colored Ceramic for Floors</u> Ceramic tiles and tilework as specified and detailed, installed complete; Including for substrate preparation, cement: sand screeds or plaster backing coats; setting, jointing and grouting; tile trim and accessories; sealants; and all other related ancillaries as indicated or required				
9.2.1.1	Supply and install anti skid colored full mass ceramic tiles for classroom (first choice) for all floor toilets, kitchen and laboratory (existing and new) or similar to existing <i>Rate or Lump Sum in Words:</i>	m ²			
9.2.1.2	Skirting same type of floors or similar to existing <i>Rate or Lump Sum in Words:</i>	m			
9.2.2	<u>New Glazed Colored Ceramic for Walls</u>				
9.2.2.1	Supply and install glazed colored ceramic for walls Include Ceramic Corner (first choice as specified or similar to <i>Rate or Lump Sum in Words:</i>	m ²			

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Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
9.2.3	<u>New Tiles for stairs</u> Supply and install tiles first choice for the new stair (treads 3cm thick - Risers 2cm thick) and landing - tiling 2cm and for all floors or otherwise specified color type and quality to be submitted for approval, works to include: - Labor, materials and installations - Under tile fill - Mortar - Lining - Step (Tread + riser) and landing and all type of skirting - And needed items to complete the works as per the Engineer instructions				
9.2.3.2	Granite 2cm Thick (Tread and Riser) <i>Rate or Lump Sum in Words:</i>	m			
9.2.3.3	Mosaic Similar to existing 4cm Thick minimum (Tread and Riser) <i>Rate or Lump Sum in Words:</i>	m			
9.2.4	<u>Repair existing broken floor tiles and skirting (all types) and reinstall by new, similar to existing for all rooms and</u> ..				
8.2.4.1	Rehabilitate and repair all damaged and broken tiles, and skirting for any type (marble - ceramic - mosaic - Cement). Remove broken or damaged pieces to be replaced without affecting the adjacent undamaged areas Work to include: - Remove all debris as specified - All materials and labors - Difference tiles (shapes thickness, dimension, pattern) as needed. - Cutting and repair - Grouting - Polish and rubbing - All needed items as per Engineer comments and complete to Engineer approval. <i>Rate or Lump Sum in Words:</i>	LS	1.00		
<i>Carried To Collection</i>					

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Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
9.2.5	<u>Rehabilitate Existing Stair Treads and Riser</u> Remove the broken treads and risers, install and supply new ones similar to the existing with the needed side bases, width as per site dimension with skirting and tiles for landing The work to be as per the Engineer instructions				
9.2.5.1	Existing Mosaic Stair the price including Skirting tiles & Landing <u>Rate or Lump Sum in Words:</u>	m			
9.2.6	<u>Threshold Tiles (Doors, Marble Topping)</u> Supply and install 3cm thick threshold as per the Engineer instructions Cost to include: - Fixing materials - All materials - All labors - All Edges must be rounded or chamfered - All needed items as per the Engineer instructions				
9.2.6.1	Natural Stone Threshold or similar to existing <u>Rate or Lump Sum in Words:</u>	m			
9.2.6.2	Marble Coping or similar to existing <u>Rate or Lump Sum in Words:</u>	m			
9.2.6.3	Natural Stone Coping or similar to existing <u>Rate or Lump Sum in Words:</u>	m			

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Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
9.2.7	<u>Clean and Rub the Existing Floor Tiles and Skirting</u> Rehabilitate any type of flooring tiles and skirting (ceramic - mosaic - etc.) Work to include: - All materials and labors - Grouting - Polish and rubbing - All needed items as per the Engineer instruction as specified				
9.2.7.1	Type 1: Marble or similar to existing <u>Rate or Lump Sum in Words:</u>	m ²			
9.2.7.2	Type 2: Ceramic or similar to existing <u>Rate or Lump Sum in Words:</u>	m ²			
9.2.7.3	Type 3: Mosaic or similar to existing <u>Rate or Lump Sum in Words:</u>	m ²			
9.3	<u>Suspended Ceilings</u> The suspended ceiling, work to include: - All panels - All heavy duty hangers and accessories as specified - Rails (hidden type) - Special metal heavy duty suspension systems - All needed heavy duty accessories and items to complete the works - Works to be indicated on drawings and as per the - Works should be coordinated between the starting and the end of the floor panels and also should be coordinated with the electromechanical units in the ceiling - All works should be as instructed by the Engineer				
9.3.1	<u>Metal Sheet Strips Suspended Ceilings:</u>				
9.3.1.3	Rehabilitate Metal Strips <u>Rate or Lump Sum in Words:</u>	m ²			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
9.5	<u>Painting</u>				
9.5.1	<u>Wall and Ceilings Paint Works</u> Wall paint include preparation of the base surfaces to receive the paints and apply the specified layers of putty and paint from the best quality as per specifications and as indicated in drawings The base surfaces should be clean and smooth and free from any pulled out old paints before starting application of the specified primer/undercoat. Apply 2 layers of putty then after smoothening, then 3 layers of the approved paint materials. All works and items should be as per manufacturer recommendation, compatible with each other and as per the Engineer instructions and approval, <i>All paint types must be <u>lead-free</u> and <u>Low VOC</u> (Volatile Organic Compounds)</i>				
9.5.1.2	Super Rubber Paint for old walls and ceilings <i>Rate or Lump Sum in Words:</i>	m ²	1,380.00		
9.5.1.4	Oil Paints for old walls and ceilings <i>Rate or Lump Sum in Words:</i>	m ²	1,660.00		
9.5.2	<u>Outside Walls Paint (Old and New Walls and Ceilings)</u>				
9.5.2.1	Paint for external old and new walls, smooth touch Work to include: - Removal of any paint or obstacle - Rehabilitate the surfaces and make them goods - Polyurethane where needed for cracks - Apply one coat of undercoat - Apply 2 coats of external paint or rolled textured paint - Apply one layer of external transparent paint (acrylic styrene copolymer elastic water proof) - All needed scaffolding and materials for the best execution of the works - All works and items should be as per manufacturer and the Engineer instructions and approval. <i>Rate or Lump Sum in Words:</i>	m ²			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
10	<u>SPECIALTIES</u>				
10.1	<u>Bathrooms Accessories</u>				
	- Remove and cart away old damaged fixtures				
	- Supply and install all needed accessories and make good their places and their surroundings				
	- Place all frame, cover joints (stainless steel) anti-corrosion				
	- Install items and their contact with the surfaces				
	- All works should be done as per the Engineer instructions				
10.1.2	<u>Soap Dispenser</u>				
10.1.2.1	Supply and install stainless steel 316 no rust, no stain, soap dispenser wall type fixation (anti-rust materials and accessories) with all needed items or similar to existing				
	All works should be done as the Engineer instructions	No			
	<i>Rate or Lump Sum in Words:</i>				
					
10.1.4	<u>Mirror for Lavatories</u>				
	Supply and install 6mm glass mirror for lavatories with colored PVC frames as show on drawings and as stated in the specifications with all needed items and accessories or similar to existing				
	The mirror should be placed on 3mm thick plywood from the back				
	All works should be done as the Engineer instructions				
10.1.4.1	Mirror (Dimension as per site conditions and engineer instruction)	No			
	<i>Rate or Lump Sum in Words:</i>				
					

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Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
10.3	<u>Resin Work</u>				
10.3.1	<u>Drinking Basin</u>				
	Supply and install drinking basin as shown on drawings of resin layers 12 mm thick fixed on galvanized steel skeleton 4 x 4 cm hollow sections and as shown on drawings				
	Work to include:				
	- Materials				
	- Labors				
	- Galvanized steel skeleton				
	- All needed items and as instructed by the Engineer				
10.3.1.1	Drinking Basin -Length (up to 2.20 m) <i>Rate or Lump Sum in Words:</i>	Nº			
10.3.1.5	Drinking Basin -Length (3.81 to 4.10 m) <i>Rate or Lump Sum in Words:</i>	Nº			
10.3.1.6	Drinking Basin -Length (4.11 to 6.20 m) <i>Rate or Lump Sum in Words:</i>	Nº			
10.3.2	<u>Lavatory Countertop</u>				
10.3.2.1	Supply and install complete counter for lavatories in toilets where shown on drawings to be of 12mm resin layer as per drawings and the work to include:				
	- All fixing elements				
	- All stainless steel hangers				
	- All necessary heavy duty accessories				
	- Counter edge of 30cm length				
	- All needed items and as instructed by the Engineer	m			
	<i>Rate or Lump Sum in Words:</i>				

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Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1459

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
	<i>From Collection</i>				
10.3.4	<u>Kitchen Counter</u>				
	Supply and install complete counter resin type with sink (resin) for teachers' kitchen of 18mm thick including coved splash back 20cm height and the work to include:				
	- All fixing elements				
	- All stainless steel hangers				
	- All necessary accessories				
	- All needed items and as instructed by the Engineer				
10.3.4.2	Kitchen Counter - Length (1.11 to 1.75m)	No			
	<u>Rate or Lump Sum in Words:</u>				
10.8	<u>Complete Accessible Toilet</u>				
10.8.1	Supply, construct, install, test and commission one complete accessible toilet, including all necessary civil, architectural, plumbing and ventilation works, fully coordinated and ready for use. The item shall include, but not be limited to, hollow concrete block walls, cement plaster and painting, ceramic floor and wall tiles, PU waterproofing, complete water supply piping and connections, complete drainage piping and connections, accessible WC and washbasin/lavatory, all required sanitary fittings and accessories, grab bars and other accessibility provisions, ventilation system, and external-grade plastic laminate door with all required ironmongery and fittings.				
	The Contractor shall verify all dimensions, levels, access requirements and existing site conditions prior to commencement of works and shall ensure that the toilet dimensions and layout comply with applicable accessibility requirements and are suitably adapted to the actual location and site constraints.				
	The Contractor shall prepare and submit complete coordinated shop drawings, including plans, sections, elevations, dimensions, sanitary and plumbing layouts, accessibility provisions, door details and all relevant details, for the Engineer's review and approval prior to execution. The rate shall include all materials, labour, fittings, supports, connections, testing, making good and all other incidental works necessary to provide a complete, functional and fully operational accessible toilet in accordance with the approved shop drawings, Drawings, Specifications, accessibility requirements and applicable standards				
	- Complete Accessible Toilet	item			
	<u>Rate or Lump Sum in Words:</u>				

Carried To Summary

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1459

Part-2 - Mechanical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
1	<u>GENERAL TECHNICAL REQUIREMENTS</u>				
1.1	<u>General Mechanical Requirements</u>				
1.1.2	Prepare the shop drawings for all mechanical works (where needed) and obtain approval from the Engineer before the start of executing any work. <i>Rate or Lump Sum in Words:</i>	Item	1.00		
1.2	<u>Rehabilitation Works General Requirements</u> Provide all necessary rehabilitation works and make all Mechanical systems in good condition complete including maintenance, cleaning, relocation works, replacing damaged items and equipment, removing and carting away resulting materials and equipment, testing and commissioning, and all other related works to ensure all Mechanical systems are properly working and functional.				
1.2.1	Maintenance and rehabilitation of existing plumbing works, including sanitary fixtures, changing Wc Covers, floor drains, roof drains, manholes, pumps, WC tanks, adding where applicable all necessary valves, flush valves, Traps, Elbow ...etc. removing newly installed showers, and all other necessary works. <i>Rate or Lump Sum in Words:</i>	Item	1.00		

Carried To Collection

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1459

Part-2 - Mechanical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
2	<u>SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION</u>				
2.1	<u>Drainage System</u> Supply, install and test the storm water drainage from (UPVC) pipes inside the building to outside and the pipes to be measured in Linear Meter with all related accessories, cleanout, elbows, vent hangers, and all necessary accessories as per standard installation details				
2.1.1	Ø 50 mm / UPVC <i>Rate or Lump Sum in Words:</i>	m			
2.1.2	Ø 75 mm / UPVC <i>Rate or Lump Sum in Words:</i>	m			
2.1.3	Ø 110 mm / UPVC <i>Rate or Lump Sum in Words:</i>	m			
2.2	<u>Floor Drain</u> Supply and install floor drain P.V.C. with chrome plated brass drain cover and to be the same level as the floor and do all necessary installation and connections. This includes all civil works and connection to the proper floor pipes and as per the Engineer instructions				
2.2.1	FD-01: Ø75 mm bottom outlet <i>Rate or Lump Sum in Words:</i>	Nº			
2.3	<u>Drain Cover</u> Supply and install floor drain cover (P.E) or (similar to existing) 5 mm thick on drainage pipe and to be the same level of the floor tiling. Work to include all civil works and as per the				
2.3.1	Cover for FCO <i>Rate or Lump Sum in Words:</i>	Nº			

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1459

Part-2 - Mechanical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
3	<u>WATER PIPE WORK INSTALLATION</u>				
3.1	<u>Water Tanks</u> Supply & install polyethylene water tank (3 layers) or more with all necessary supply and over flow connections all as per the Engineer instructions				
3.1.2	2000 liters PE water tank <i>Rate or Lump Sum in Words:</i>	No			

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1459

Part-2 - Mechanical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
5	<u>SANITARY FIXTURES</u>				
5.1	<u>W.C. for Kids</u> Supply and install K.G. W.C. Flush valve with cover as manufactured by Duravit - Bambi No. 018509 or approved equal, or similar to existing, 35 cm height max. from finished floor with timber cover. Cost to include all related connections angle valves and necessary accessories as per the Engineer instructions. Each W.C. should be equipped with a Flushing Hose (Grohe or Ideal standard or approved equal, or similar to existing)				
5.1.1	EWC-03 (Wall Hang - 52 x 32 cm) <i>Rate or Lump Sum in Words:</i>	Nº			
5.2	<u>W.C. For Non Kids</u> Supply and install W.C. for non kids, Flush valve with cover as manufactured by Ideal Standard Item No. E876801 also the hose, or approved equal, or similar to existing, and to be 40 cm from floor finish with timber cover. The work to include the installation, liking, cleaning with all necessary connection, angle valves and necessary accessories similar to the K.G.W.C. Each W.C. should be equipped with a Flushing Hose (Grohe or Ideal standard or approved equal, or similar to existing)				
5.2.1	EWC-01 (Wall Hang - 52 x 36 cm) or as existing <i>Rate or Lump Sum in Words:</i>	Nº			
5.2.3	AWC-01 (Asian water closet) <i>Rate or Lump Sum in Words:</i>	Nº			

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1459

Part-2 - Mechanical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
5.3	<u>Lavatories for Kids in the K.G.</u> Supply and install semi pedestal wash basin similar to Ideal Standard No. 742001 or approved equal, or similar to existing, 45 x 36 cm, and fixed at 60 cm high from the floor finish. Cost to include all necessary connections, angle valves and accessories as required				
5.3.1	LAV-03 (semi-pedestal wash basin - 45 x 35 cm) <i>Rate or Lump Sum in Words:</i>	Nº			
5.4	<u>Lavatories for Non Kids</u> Supply and install semi pedestal wash basin similar to Ideal Standard No. 742001 or approved equal, or similar to existing, and fixed at 82 cm high from the floor finish. Cost to include all necessary connections, angle valves, traps and necessary accessories as specified.				
5.4.1	LAV-01 (semi-pedestal with mixers 55 x 45 cm) <i>Rate or Lump Sum in Words:</i>	Nº	2.00		
5.6	<u>Self Close Taps on Kids & Students Lavatories</u> Supply and install self close taps to be fixed in the lavatory body as manufactured by Grohe Item No. 36-173, or similar to existing, with all required works and drain accessories including trap, to be connected to the new water supply and drain and as instructed by the Engineer				
5.6.1	Self Close Taps <i>Rate or Lump Sum in Words:</i>	Nº			
5.7	<u>Wall Type Self Close Taps on Drinking Basins</u> Supply and install self close taps to be fixed in the drinking basin body as manufactured by Grohe Item No. 36-176, or similar to existing, with all required works and drain accessories including trap and to be connected to the new water supply and drain and as instructed by the Engineer				
5.7.1	Wall Type Self Close Taps <i>Rate or Lump Sum in Words:</i>	Nº	4.00		
Carried To Summary					

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1459

Part-3 - Electrical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
1	<u>BASIC ELECTRICAL REQUIREMENTS</u>				
	The Contractor should revise all the drawings and compare them with the site conditions and redo all the design works with the necessary calculations for all the electrical installations and works. Moreover, the Contractor should submit shop drawings and as-built drawings for the maintenance use in the future. The contractor should provide all the necessary maintenance works for all Electrical systems related to the KG school to ensure its proper works. At the end of the project, the contractor should submit complete As-Built Drawings for all executed works with exact dimensions & sizes for easy maintenance work in the future.				
1.1	<u>Fixing and Repairing</u>				
	Check & repair all the existing cables, wires, socket outlets, lighting fixtures, lighting switches, electric fans, and protect all exposed wiring as per the site conditions, and to the satisfaction of the Engineer. All as per the drawings, specifications and Engineer instructions				
1.1.1	Lighting fixtures	LS	1.00		
	<i>Rate or Lump Sum in Words:</i>				
1.1.2	Wires and cables	LS	1.00		
	<i>Rate or Lump Sum in Words:</i>				
1.1.3	Sockets and switches	LS	1.00		
	<i>Rate or Lump Sum in Words:</i>				
1.1.4	Circuit breakers	LS	1.00		
	<i>Rate or Lump Sum in Words:</i>				
1.1.5	Disconnecting switches	LS	1.00		
	<i>Rate or Lump Sum in Words:</i>				

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1459

Part-3 - Electrical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
1.1.6	Electrical panel boards with grounding <i>Rate or Lump Sum in Words:</i>	LS	1.00		
1.1.9	All needed electrical works ... etc. <i>Rate or Lump Sum in Words:</i>	LS	1.00		

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1459

Part-3 - Electrical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
2	<u>PANELBOARDS</u>				
2.1	Supply, install or rehabilitate the existing panel board if possible including enclosures, busbars, protective devices, MCB & MCCB breakers according to IEC-60947-2 as per the site conditions and Engineer instructions.				
2.1.1	MDB	Nº			
	<i>Rate or Lump Sum in Words:</i>				
					
					

Carried To Collection

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1459

Part-3 - Electrical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
3	<u>GENERAL LIGHTING INSTALLATIONS</u>				
3.1	<u>Lighting Fixtures</u> Supply, install and test the lighting fixtures complete with all the necessary wires conduits, boxes and accessories required to provide power to each lighting fitting from LP including the earth wire as per the drawings, specifications and Engineer instructions. The Contractor should submit samples of each lighting fixture for approval.				
3.1.1	TYPE C1: Twin T8 LED Tube, surface-mount luminaire for interior, 40W, 4000K, 4700Lm. Polycarbonate, light grey, with injected polyurethane double gasket and clear UV stabilized polycarbonate cover, $\cos \phi \geq 0.9$, or similar to existing.	Nº			
	<i>Rate or Lump Sum in Words:</i>				
3.1.4	TYPE A2 / A3: 600x600 mm LED Panel 3600lm, 33W, 4000K, 80CRI surface-mount/recessed, die-cast aluminum, IP20, or similar to existing.	Nº			
	<i>Rate or Lump Sum in Words:</i>				
3.1.6	TYPE N4 / N3: LED - 900lm - 12.5W - 3000K - 80CRI - WW Surface mounted / Recessed Downlight Round - 120 deg, or similar to existing.	Nº	13.00		
	<i>Rate or Lump Sum in Words:</i>				

Carried To Collection

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1459

Part-3 - Electrical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
10	<u>LIFTS REHABILITATION</u>				
10.1	Rehabilitation of the existing lift as described in specification, including all coordination, design, execution drawing and details, security of the personnel, scaffolding, labor and equipment necessary for the perfect operation of the lift and to the satisfaction of the engineer Cost to include 5 years maintenance contract with all necessary spare parts and all as needed. For 2 hours (fire rated) having the following characteristics: Capacity: as per existing Speed: as per existing Entrance size/ type: as per site dimensions Opening as per existing <i>Rate or Lump Sum in Words:</i> 	No			

Carried To Summary

***Bill of Quantities - Lot-3 - School CERD: 1490
Kfartoun Public School***

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1490

Summary

<u>Description</u>	<u>Amount (US \$)</u>
Part-1 - Civil, Structural and Architectural Works	
Part-2 - Mechanical Engineering Services	
Part-3 - Electrical Engineering Services	
	
* Total Amount of Bill of Quantities	
* Discount by Tenderer (_____ %)	
	
	
* Total Amount of Tender (VAT Not Applicable)	
	
	
* Total Amount of Tender in Words:	
.....	
.....	
.....	

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1490

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
1	<u>SITE PREPARATION AND DEMOLITION</u>				
1.1	<u>Demolishing and Removal of Debris</u>				
1.1.1	The works include all types of demolition and the removal of debris and damaged elements such but not limited to, the following: - Existing plastering and concrete items such as foundations, columns, slabs, etc. - Damaged Tiling (floors and walls) - Toilet fixtures and pipes installation of all sizes - Counter tops, bases and sinks - Water tanks of different types - Hollow concrete block walls or concrete walls of all sizes - Demolition of the existing ramps / Stairs and the execution of the given plans and specifications - Including the necessary equipment for the removal of debris and all resulting materials - etc. <i>Rate or Lump Sum in Words:</i> 	LS	1.00		

Carried To Collection

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1490

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
2	<u>SITE PREPARATION AND DEMOLITION</u>				
2.3	<u>Existing Walkways</u>				
2.3.1	Repair existing walkways at project site boundary; precast concrete paver tiles, bases courses, etc., as necessary, where damaged or distributed by new construction without affecting the adjacent undamaged areas; make good and joint at junction with new precast concrete paving and/or curbing as required and to Engineer's approval.	LS			
	<i>Rate or Lump Sum in Words:</i>				
2.5	<u>Ramp for External Existing Sidewalk or for accessibility purpose</u>				
2.5.1	Supply and install external pedestrian ramp as per approved shop drawing submitted by contractor Work to include: - Remove parts of sidewalk including curbstone and existing tiles - Remove the debris to outside the site - Submit detailed shop drawing compatible with ADA requirements - Supply and install concrete curbstone for the ramp - Supply and install floor tiles identical to the existing with mortar and all layers - All needed items as per the Engineer instructions	LS	1.00		
	<i>Rate or Lump Sum in Words:</i>				
2.9	<u>Rehabilitation of Playground Slabs (External Playground)</u>				
2.9.1	Clean the rehabilitated places by removing all debris and make good all the edges and remove all broken slabs & failed slabs and remove to outside the site all the debris & refused items, cast proper concrete in places where the removal of all debris (No patching is allowed for the existing concrete surfaces) Work to include: - Removal and cleaning the location - Materials, fill - Labors - Make good the surfaces - Lining and marking all playgrounds as per site instructions - All needed refurbishing works as per the Engineer instructions	m ²			
	<i>Rate or Lump Sum in Words:</i>				
	<i>Carried To Collection</i>				

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1490

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
3	<u>CONCRETE</u>				
3.2	Reinforced Concrete Footings, Tie Beams, Columns and Walls Drop - Parapete - Slab on Grade				
3.1.2	Supply, cast and vibrate concrete for footing, tie beams, walls, parapets. Up stand, drop parapets with a crushing strength 350kg/cm2, cost to includes: - Formwork - Steel reinforcement - All needed work as per Specifications and the Engineer instructions <i>Rate or Lump Sum in Words:</i>	m3			

Carried To Collection

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1490

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
4	<u>MASONRY</u>				
4.1	<u>Hollow or Solid Concrete Blocks and Claustra</u> Supply and install concrete blocks as per drawings Work to include: - All places as per the drawings, and the Engineer instructions. - Materials - Cement mortar and the use of extruded nets and reinforcement by means of metal gates and the placement of angles of galvanized steel iron of concrete columns thickness of 4 mm every 60 cm - Labors and all items needed and instructions by the Engineer				
4.1.2	10 cm hollow concrete blocks <i>Rate or Lump Sum in Words:</i>	m ²			
4.1.4	15 cm hollow concrete blocks <i>Rate or Lump Sum in Words:</i>	m ²			

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1490

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
	<i>From Collection</i>				
4.2	<u>Rehabilitate and Clean masonry walls showing deep crack</u> The repair method requires the replacement of some stone masonry that has been damaged by the crack. It will include the use of horizontal reinforcement. Remove cracked stones in a “toothed” pattern to the extent that a sound repair is possible. Clean the crack if it continues to extend into the mass masonry and grout with non shrink mortar. Key new stone in stone masonry perpendicular to the wall surface in addition to the “toothed” and stepped pattern parallel to the wall surface. With larger more extensive cracks remove additional stones in a stepped pattern on both sides and the top of crack and restore by installing new stones. With smaller repairs lesser amounts of stones will have to be removed. Place horizontal reinforcement every 5th course. Mechanical ties to secure geogrid may be required. The horizontal reinforcement shall bridge over the crack and extend the length of new stone masonry. Replicate the coursing pattern of the existing exposed surface. Place new stones that are not exposed in an alternating stretcher-header bonding pattern to wall surface or top of wall. Construct the new stone masonry in complete horizontal courses where possible. Do not construct more than 5 courses before allowing masonry to dry. Lay subsequent stone courses on fresh wet mortar. Apply mortar at head joints as well as bed joints and finish one-half the width of the mortar joint below the surface of the stones.				
4.2.1	<u>Rehabilitate Natural Stone Facades</u> Rehabilitate works on natural stone facades work should be by replacing the damaged stone and not filling with mortar. Work to include: - Determine location of damaged stone walls and location of dampness. Broken or damaged pieces to be replaced, then cleaning & leveling; without affecting the adjacent undamaged - Treat the dampness and the causes - Repair the stone by renewing the damaged and replace it with new ones with same stone and apply one layer of water proofing transparent paint - Clear the place and infill in between the coarse (Lining) - All works as instructed by the Engineer <i>Rate or Lump Sum in Words:</i> <i>Carried To Collection</i>	m ²			

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1490

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
	<i>From Collection</i>				
5	<u>METAL WORKS</u>				
5.1	Provide New Steel Work (Door & Windows)				
5.1.1	Provide new steel doors with related accessories as per <i>Rate or Lump Sum in Words:</i>	Nº			
5.1.3	Provide new double glazed aluminum windows with new burglar proof protection <i>Rate or Lump Sum in Words:</i>	Nº			
5.2	<u>Rehabilitate and Maintain the Existing Steel Work (Burglar Proof Protection + Opening)</u> Rehabilitate the existing steel windows or doors as per specifications and drawings and the Engineer instruction Work to include: - Remove all damaged members and replace by new ones - Rub completely to secure all parts and use putty to make faces smooth - Apply two layers of anti rust paint - Apply putty - Apply three layers of epoxy external paint - All needed items as per the Engineer instructions				
5.2.1	Rehabilitate existing steel doors <i>Rate or Lump Sum in Words:</i>	Nº	9.00		
5.2.2	Rehabilitate existing steel gates <i>Rate or Lump Sum in Words:</i>	Nº	2.00		
5.2.4	Rehabilitate existing burglar proof steel protection <i>Rate or Lump Sum in Words:</i>	Nº			
5.2.5	Rehabilitate and paint existing steel louvers with related <i>Rate or Lump Sum in Words:</i>	Nº			
5.2.6	Rehabilitate and paint existing steel window / Curtain Wall <i>Rate or Lump Sum in Words:</i>	Nº	3.00		
	<i>Carried To Collection</i>				

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1490

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
5.3	<u>Rehabilitate Existing Steel Shed Works</u> Rehabilitate the existing steel elements of the existing shed and the work to include: - Remove existing cover (Asbestos, TOT, etc.) and to be dismantled and carted away to outside the site to dumps approved by municipality - Brick tiles to be disassembled and removed and stored in appropriate location as per engineer's instruction and to checked for reused if needed - Clean, rub and repaint all steel structure and do the necessary reinforcement - Damaged steel structure to be replaced with new steel structure similar to existing. - Support and add new beams similar to existing. - Remove existing paint & clean deeply as per SSPC code and ISO 8501 - Apply base and epoxy as specified - Supply the roof covers as per drawings - Install the galvanized steel gutter (No Welded) and all Steel pipe works - Corrugated Metal sheet flashing between walls and shed roof with mastic - All needed items as per the Engineer instructions				
5.3.1	Rehabilitate and strength steel sheds and replace existing sheet by insulated sandwich panel <i>Rate or Lump Sum in Words:</i>	m ²			
5.3.2	Rehabilitate and strength steel sheds and replace existing sheet by polycarbonate triple layer <i>Rate or Lump Sum in Words:</i>	m ²			
5.3.3	Rehabilitate and strength steel sheds and replace existing sheet by insulated sandwich panel with polycarbonate triple layer <i>Rate or Lump Sum in Words:</i>	m ²			
5.3.4	Rehabilitate and strength steel sheds and replace existing sheet by PVC sheet or as exisitng <i>Rate or Lump Sum in Words:</i>	m ²			
<i>Carried To Collection</i>					

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1490

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
5.3.5	Rehabilitate and strength steel sheds and replace existing sheet by brick tiles <i>Rate or Lump Sum in Words:</i>	m ²			
5.3.6	Rehabilitate and strength existing roof bricks and change broken bricks by new ones <i>Rate or Lump Sum in Words:</i>	m ²			
5.3.7	Rehabilitate connection between wall and corrugated roof, a new gutter to be Provided <i>Rate or Lump Sum in Words:</i>	m			
5.5	<u>Rehabilitate and Maintain Steel Handrail</u> - Rehabilitate the existing metal handrail and remove the damaged members and replace by new - Reinforce the existing handrail with similar members in addition to the rail and all necessary accessories - Remove existing paint & clean deeply as per SSPC code and ISO 8501 - Apply one layer of epoxy base paint - Apply putty - Apply epoxy paint as per specification All needed items as per the Engineer instructions				
5.5.1	Floor Mounted <i>Rate or Lump Sum in Words:</i>	m			
5.5.2	Wall Mounted <i>Rate or Lump Sum in Words:</i>	m			

Carried To Collection

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1490

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
6	<u>WOOD AND PLASTICS</u>				
6.1	<u>Joinery Works</u>				
6.1.1	<u>Rehabilitate Existing Kitchen Cupboards</u> Rehabilitate existing cupboards, cabinets, drawers, counters, etc., for the existing kitchen. Works to include replacing damaged elements, accessories, material, labor, equipment, maintaining support, change of the top of counter by new resin counter as specified, etc. As per engineer's approval.				
	- Repair wood elements in accordance with AWI Quality Standards requirements. - Repair framing and sash members with mortise and Tenon joints. Ensure joints and connections are flush, hairline, and weather-tight. - Scarf joints permitted when wood matches in color and grain texture. Form sills and stools in one piece. - Fabricate components with minimum clearances and shim spacing around perimeter of assembly, yet allowing installation and dynamic movement of perimeter seal.				
6.1.1.1	Kitchen Cupboards <i>Rate or Lump Sum in Words:</i>	m			

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1490

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
	<i>From Collection</i>				
7	<u>THERMAL AND MOISTURE PROTECTION</u>				
7.0	<u>Preliminaries</u>				
7.0.2	Dismantle and remove all existing materials on roof: Tiles, Membranes, existing water tanks, Mechanical Pumps and Systems, Electrical Systems, skirting, etc.; and all equipment as per engineer instructions The unwanted/ unused materials should be cart away from the site The remaining items should be reinstalled in a proper way as per engineering instructions <i>Rate or Lump Sum in Words:</i>	LS	1.00		
7.1	<u>Roof Waterproofing</u>				
7.1.1	Works should be applied and done by experts with previous experience in similar works. Works to include: - DEEP cleaning of all surfaces and carting away of dust & - Concrete pad for water tanks as indicated - Sand cement screed layer to Provide proper slopes minimum 0.75% - Expansion joint sealant to be done respecting back rod, un-bonding tape, adequate thickness of sealant, type & finish of sealant (fire rated) & design drawings especially on roof & planters. - Provide tackle coat (Proper) - Provide 4mm thick, SBS layer from an approved manufacturer - Provide protection for all pipe works and drains - Provide heat insulation layers of 35 KG/m ³ where required - Provide Geotextile layers - Provide all aluminum flashing with mastic - Provide finishing material as required - All as specified and approved shop drawings <i>Rate or Lump Sum in Words:</i>	m ²			

Carried To Collection

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1490

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
8	<u>DOOR AND WINDOWS</u>				
8.1	<u>Wooden Doors and Windows</u>				
	Supply and install all timber work with all related items The joinery works should be of the first class type and as per specifications and drawings Work to include:				
	- Material and labors				
	- All accessories to be heavy duty (Hinged, Lock, Glass vision, as required, etc.)				
	- The frame for any width (Steel, Wood, etc.)				
	- Paint as follows:				
	- Anti rust layers				
	- Putty + one layer of undercoat				
	- Three layers of epoxy paint				
	- Apply and fix 6mm wired clear glass				
	- View Permitting glass opening where needed				
	- remove the existing timber panels				
	- repair the edges				
	- The Contractor should submit shop drawings				
	- All needed items as the Engineer instructions				
8.1.1	<u>Timber Doors</u>				
	Supply and install flush timber door as per drawings with laminated plastic facing and the door should have 10cm width frame between the plywood and fill with timber beads by tongue and groove each 5cm, and the door edges should behead wood and fixed by tongue and groove frames should be as specified, with fixed glass panel vision window, and similar to existing, and to the Engineer's instructions				
	- Works included, all accessories and fittings, pre-painting and finishing paint sides of doors and box frames.				
	- All works should be done as per the Engineer instructions				
8.1.1.1	Provide new double leaf wooden door	N _o			
	<u>Rate or Lump Sum in Words:</u>				
					
8.1.1.2	Provide new single leaf wooden door with view frame	N _o			
	<u>Rate or Lump Sum in Words:</u>				
					

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Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
	<i>From Collection</i>				
8.1.3	<u>Rehabilitate the Existing Timber Doors</u> As stated in the Preambles of Item 8.1 In addition, rehabilitate the existing timber doors: The minimum amount of existing timber should be removed to allow an effective repair to be formed. Cut out deteriorated area of timber in sloping splice to give optimum area of surface to be glued & fixed. Well-seasoned timber to be used in forming a repair with the line and density of grain (number of growth rings) of new timber matching the existing as closely as possible. For all joinery work, timber with shakes, fissures, warping, heartwood, sapwood or numerous/large knots should be avoided for use in repair. Always work new material to the line of the existing and avoid unnecessary trimming of original timber. Repairs should follow any existing deformations in the line of the wood element (e.g. door or window). Avoid mixing timber species between new and existing in a repair as joint between the two is likely to fail from different rates of expansion and contraction during dry & damp conditions. Where possible, spliced repairs to be designed to ensure moisture is towards the outer face of timber and that moisture does not lay on the repair joint. The length of the splice is governed by section of timber and the nature of component being repaired and it should be designed to ensure an effective bond between new and existing sections of timber. Where wood element are to be dismantled as part of the repair process, always mark and record the constituent parts before dismantling, similarly, number of glass panes/quarries before removal. If applicable carefully soften putty or remove wood trim and then remove glass. Use glue, to connect a new outer section of bottom rail to the existing sound timber. Drill and insert new wooden pins or fix using brass screws from inside. Casements or sashes are often in sound condition but the joints have become loose due to the break down of glue and loose wedges. The wedges will often be easily removable and will probably be unsuitable for re-use. It may be for the joints to be pulled together successfully. Attach door frame and shims to perimeter opening to accommodate construction tolerances & all irregularities. Align door plumb and level, free of warp or twist. Maintain dimensional tolerances and alignment with adjacent work. Install operating hardware.				
8.1.3.1.1	Rehabilitate and paint existing single leaf timber doors with related accessories	Nº	21.00		
	<i>Rate or Lump Sum in Words:</i>				
	<i>Carried To Collection</i>				

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Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
8.1.3.1.2	Rehabilitate existing double leaf door <i>Rate or Lump Sum in Words:</i>	Nº			
8.1.3.1.4	Rehabilitate wooden windows <i>Rate or Lump Sum in Words:</i>	Nº			
8.2	<u>Aluminum Doors and Windows</u> Fabricate, supply and install aluminum works as manufactured by SIDEM 2000 first choice with all necessary accessories as per the drawings and the Engineer instructions, cost to include all doors and windows: - Reveals hard stone 3cm thick, all around for external opening - Apply EPDM around door and windows where necessary - Single glass 6 mm - Double glass 6-12-6 mm (Outer Glass should be Tempered) - Hinges and locks - Joint Filler - Mosquito Screen - Mesh - All items needed as per the Engineer instructions - All as specified and base on an approved shop drawings after exact dimensions				
8.2.1	<u>New Aluminum Panels (Double Glass)</u> Supply and install the fabricated aluminum panels with double glass (6 - 12 - 6 mm) (Outer Glass should be Tempered or similar to existing)				
8.2.1.1	Provide new aluminum double glazed window & door panel <i>Rate or Lump Sum in Words:</i>	Nº			
8.2.2	<u>New Aluminum Internal Door</u> Supply and install aluminum door with frame and related strengthening stud, Works to include: Materials, and accessories - Labors - All needed items as per the engineer instructions. - Repair all around the opening				
8.2.2.1	Provide new aluminum partition door as indicated. <i>Rate or Lump Sum in Words:</i>	Nº	4.00		
<i>Carried To Collection</i>					

**Lebanon Emergency Assistance Project (LEAP)
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Bill of Quantities - Lot-3 - School CERD: 1490

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
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From Collection

- 8.2.3 Rehabilitation Existing Glazed Aluminum Panels (s)**
Replacing Broken Glass. Fixing Hardware Issues: Check the functionality of latches, hinges, and other hardware. If any parts are broken, replace them with new ones to ensure the window operates smoothly. After repairs, apply a high-quality sealant around the edges to prevent moisture intrusion. If the paint is peeling or faded, consider repainting the frame with a metal paint formulated for aluminum to enhance durability and appearance.

8.2.3.1	Rehabilitate existing windows, doors and gates	Nº	15.00		
	<i>Rate or Lump Sum in Words:</i>				
					
					

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Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
9	<u>FINISHES</u>				
9.1	<u>Cement Plaster</u>				
	Supply and install sand cement plaster on concrete and block wall surfaces as specified The plaster layer should be own a base rough layer The plaster works should be on level points and each point should be at 1.5 m from the second only Work to include: - Materials and accessories (galvanized, wire mesh, cover beds, etc.) - Labors - All addition watering - All tools - Plaster thickness more than 2 cm - All needed items as per drawings and the Engineer instructions				
9.1.1	<u>Internal and External Plaster Works</u>				
9.1.1.1	Supply and apply one layer of sand cement plaster over a rough textured layer of plaster Price included all accessories, material, scaffolding and labor, etc. <i>Rate or Lump Sum in Words:</i>	m ²	3.00		

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Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
From Collection					
9.1.2	<u>Repair of Existing Plaster (Internal - External) (Cracks,</u>				
9.1.2.1	Rehabilitate and repair cracked and damaged plaster indoor and outdoor Work to include: - Determine the location and remove all loose items around the area - Remove the cracked plaster layer - Remove the pulled out layers - Clean the places with suitable materials - Fill all cracks after widening by (No Suggestions) or approved equal. - Remove loose and other deteriorated materials prior to the new repair. Take special care not to damage the adjacent original materials. Prepare mortar joints for installation of lateral reinforcement where it is required. Use thin steel bars to clean joints to maximum depth possible. Remove loose mortar. Mix mortar with minimal amount of water (potable) prior to use. All separation cracks between perpendicular walls shall be filled grout to reduce additional movement from wind loads and thermal expansion-contraction. - Clear debris from crack by probing, brushing, and blowing. - Force non-shrink mortar mixture into crack as deep as possible with hands, wood and metal probes. Use as dry a mix as possible. Use stone bats to fill larger crack voids. Ensure mortar is forced into smaller/deeper cracks. Mortar grout will be fluid in order to flow into crack. Either grout bags or gravity flow shall be used depending on the conditions. Fil Protect repairs from rapid drying by misting, shading, protecting from dry wind cracks in a series of applications rather than one large application. Final application shall not be flush with the surface, but shall be one half the width of the crack below the surface. Remove all tool marks with brush. - Apply the finish rough plaster layer - Install galvanized steel mesh 20 cm width at least - Apply the second smooth plaster layer	LS	1.00		
Rate or Lump Sum in Words:					

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Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
9.2	<u>Tiling Works</u> Supply and install all tiling items for floors, with the skirting Work to include all materials and labors and the Contractor should use all necessary rods and levels as per the Engineer instructions Price to include: - Sand below tiles - Materials, tiles, mortars - Labors - Rubbing - Filling between tiles - Filling the skirting - Remove unsuitable items - Cleaning the places - All needed items as per the Engineer instructions				
9.2.1	<u>New Full Mass Colored Ceramic for Floors</u> Ceramic tiles and tilework as specified and detailed, installed complete; Including for substrate preparation, cement: sand screeds or plaster backing coats; setting, jointing and grouting; tile trim and accessories; sealants; and all other related ancillaries as indicated or required				
9.2.1.1	Supply and install anti skid colored full mass ceramic tiles for classroom (first choice) for all floor toilets, kitchen and laboratory (existing and new) or similar to existing <i>Rate or Lump Sum in Words:</i>	m ²			
9.2.1.2	Skirting same type of floors or similar to existing <i>Rate or Lump Sum in Words:</i>	m			
9.2.2	<u>New Glazed Colored Ceramic for Walls</u>				
9.2.2.1	Supply and install glazed colored ceramic for walls Include Ceramic Corner (first choice as specified or similar to <i>Rate or Lump Sum in Words:</i>	m ²			

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Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
9.2.3	<u>New Tiles for stairs</u> Supply and install tiles first choice for the new stair (treads 3cm thick - Risers 2cm thick) and landing - tiling 2cm and for all floors or otherwise specified color type and quality to be submitted for approval, works to include: - Labor, materials and installations - Under tile fill - Mortar - Lining - Step (Tread + riser) and landing and all type of skirting - And needed items to complete the works as per the Engineer instructions				
9.2.3.2	Granite 2cm Thick (Tread and Riser) <i>Rate or Lump Sum in Words:</i>	m			
9.2.3.3	Mosaic Similar to existing 4cm Thick minimum (Tread and Riser) <i>Rate or Lump Sum in Words:</i>	m			
9.2.4	<u>Repair existing broken floor tiles and skirting (all types) and reinstall by new, similar to existing for all rooms and</u> ..				
8.2.4.1	Rehabilitate and repair all damaged and broken tiles, and skirting for any type (marble - ceramic - mosaic - Cement). Remove broken or damaged pieces to be replaced without affecting the adjacent undamaged areas Work to include: - Remove all debris as specified - All materials and labors - Difference tiles (shapes thickness, dimension, pattern) as needed. - Cutting and repair - Grouting - Polish and rubbing - All needed items as per Engineer comments and complete to Engineer approval. <i>Rate or Lump Sum in Words:</i>	LS	1.00		
<i>Carried To Collection</i>					

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Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
9.2.5	<u>Rehabilitate Existing Stair Treads and Riser</u> Remove the broken treads and risers, install and supply new ones similar to the existing with the needed side bases, width as per site dimension with skirting and tiles for landing The work to be as per the Engineer instructions				
9.2.5.1	Existing Mosaic Stair the price including Skirting tiles & Landing <i>Rate or Lump Sum in Words:</i>	m			
9.2.6	<u>Threshold Tiles (Doors, Marble Topping)</u> Supply and install 3cm thick threshold as per the Engineer instructions Cost to include: - Fixing materials - All materials - All labors - All Edges must be rounded or chamfered - All needed items as per the Engineer instructions				
9.2.6.1	Natural Stone Threshold or similar to existing <i>Rate or Lump Sum in Words:</i>	m	1.00		
9.2.6.2	Marble Coping or similar to existing <i>Rate or Lump Sum in Words:</i>	m			
9.2.6.3	Natural Stone Coping or similar to existing <i>Rate or Lump Sum in Words:</i>	m			

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Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
9.2.7	<u>Clean and Rub the Existing Floor Tiles and Skirting</u> Rehabilitate any type of flooring tiles and skirting (ceramic - mosaic - etc.) Work to include: - All materials and labors - Grouting - Polish and rubbing - All needed items as per the Engineer instruction as specified				
9.2.7.1	Type 1: Marble or similar to existing <i>Rate or Lump Sum in Words:</i>	m ²			
9.2.7.2	Type 2: Ceramic or similar to existing <i>Rate or Lump Sum in Words:</i>	m ²			
9.2.7.3	Type 3: Mosaic or similar to existing <i>Rate or Lump Sum in Words:</i>	m ²			
9.3	<u>Suspended Ceilings</u> The suspended ceiling, work to include: - All panels - All heavy duty hangers and accessories as specified - Rails (hidden type) - Special metal heavy duty suspension systems - All needed heavy duty accessories and items to complete the works - Works to be indicated on drawings and as per the - Works should be coordinated between the starting and the end of the floor panels and also should be coordinated with the electromechanical units in the ceiling - All works should be as instructed by the Engineer				
9.3.1	<u>Metal Sheet Strips Suspended Ceilings:</u>				
9.3.1.3	Rehabilitate Metal Strips <i>Rate or Lump Sum in Words:</i>	m ²			

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Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
9.5	<u>Painting</u>				
9.5.1	<u>Wall and Ceilings Paint Works</u> Wall paint include preparation of the base surfaces to receive the paints and apply the specified layers of putty and paint from the best quality as per specifications and as indicated in drawings The base surfaces should be clean and smooth and free from any pulled out old paints before starting application of the specified primer/undercoat. Apply 2 layers of putty then after smoothening, then 3 layers of the approved paint materials. All works and items should be as per manufacturer recommendation, compatible with each other and as per the Engineer instructions and approval, <i>All paint types must be <u>lead-free</u> and <u>Low VOC</u> (Volatile Organic Compounds)</i>				
9.5.1.2	Super Rubber Paint for old walls and ceilings <i>Rate or Lump Sum in Words:</i>	m ²	1,810.00		
9.5.1.4	Oil Paints for old walls and ceilings <i>Rate or Lump Sum in Words:</i>	m ²	1,115.00		
9.5.2	<u>Outside Walls Paint (Old and New Walls and Ceilings)</u>				
9.5.2.1	Paint for external old and new walls, smooth touch Work to include: - Removal of any paint or obstacle - Rehabilitate the surfaces and make them goods - Polyurethane where needed for cracks - Apply one coat of undercoat - Apply 2 coats of external paint or rolled textured paint - Apply one layer of external transparent paint (acrylic styrene copolymer elastic water proof) - All needed scaffolding and materials for the best execution of the works - All works and items should be as per manufacturer and the Engineer instructions and approval. <i>Rate or Lump Sum in Words:</i>	m ²			

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Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
10	<u>SPECIALTIES</u>				
10.1	<u>Bathrooms Accessories</u>				
	- Remove and cart away old damaged fixtures				
	- Supply and install all needed accessories and make good their places and their surroundings				
	- Place all frame, cover joints (stainless steel) anti-corrosion				
	- Install items and their contact with the surfaces				
	- All works should be done as per the Engineer instructions				
10.1.2	<u>Soap Dispenser</u>				
10.1.2.1	Supply and install stainless steel 316 no rust, no stain, soap dispenser wall type fixation (anti-rust materials and accessories) with all needed items or similar to existing				
	All works should be done as the Engineer instructions	No			
	<i>Rate or Lump Sum in Words:</i>				
					
10.1.4	<u>Mirror for Lavatories</u>				
	Supply and install 6mm glass mirror for lavatories with colored PVC frames as show on drawings and as stated in the specifications with all needed items and accessories or similar to existing				
	The mirror should be placed on 3mm thick plywood from the back				
	All works should be done as the Engineer instructions				
10.1.4.1	Mirror (Dimension as per site conditions and engineer instruction)	No			
	<i>Rate or Lump Sum in Words:</i>				
					

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Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
10.3	<u>Resin Work</u>				
10.3.1	<u>Drinking Basin</u>				
	Supply and install drinking basin as shown on drawings of resin layers 12 mm thick fixed on galvanized steel skeleton 4 x 4 cm hollow sections and as shown on drawings				
	Work to include:				
	- Materials				
	- Labors				
	- Galvanized steel skeleton				
	- All needed items and as instructed by the Engineer				
10.3.1.1	Drinking Basin -Length (up to 2.20 m)	Nº			
	<i>Rate or Lump Sum in Words:</i>				
					
10.3.1.5	Drinking Basin -Length (3.81 to 4.10 m)	Nº			
	<i>Rate or Lump Sum in Words:</i>				
					
10.3.1.6	Drinking Basin -Length (4.11 to 6.20 m)	Nº			
	<i>Rate or Lump Sum in Words:</i>				
					
10.3.2	<u>Lavatory Countertop</u>				
10.3.2.1	Supply and install complete counter for lavatories in toilets where shown on drawings to be of 12mm resin layer as per drawings and the work to include:				
	- All fixing elements				
	- All stainless steel hangers				
	- All necessary heavy duty accessories				
	- Counter edge of 30cm length				
	- All needed items and as instructed by the Engineer	m			
	<i>Rate or Lump Sum in Words:</i>				
					

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Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
	<i>From Collection</i>				
10.3.4	<u>Kitchen Counter</u>				
	Supply and install complete counter resin type with sink (resin) for teachers' kitchen of 18mm thick including covered splash back 20cm height and the work to include:				
	- All fixing elements				
	- All stainless steel hangers				
	- All necessary accessories				
	- All needed items and as instructed by the Engineer				
10.3.4.2	Kitchen Counter - Length (1.11 to 1.75m)	No			
	<u>Rate or Lump Sum in Words:</u>				
10.8	<u>Complete Accessible Toilet</u>				
10.8.1	Supply, construct, install, test and commission one complete accessible toilet, including all necessary civil, architectural, plumbing and ventilation works, fully coordinated and ready for use. The item shall include, but not be limited to, hollow concrete block walls, cement plaster and painting, ceramic floor and wall tiles, PU waterproofing, complete water supply piping and connections, complete drainage piping and connections, accessible WC and washbasin/lavatory, all required sanitary fittings and accessories, grab bars and other accessibility provisions, ventilation system, and external-grade plastic laminate door with all required ironmongery and fittings.				
	The Contractor shall verify all dimensions, levels, access requirements and existing site conditions prior to commencement of works and shall ensure that the toilet dimensions and layout comply with applicable accessibility requirements and are suitably adapted to the actual location and site constraints.				
	The Contractor shall prepare and submit complete coordinated shop drawings, including plans, sections, elevations, dimensions, sanitary and plumbing layouts, accessibility provisions, door details and all relevant details, for the Engineer's review and approval prior to execution. The rate shall include all materials, labour, fittings, supports, connections, testing, making good and all other incidental works necessary to provide a complete, functional and fully operational accessible toilet in accordance with the approved shop drawings, Drawings, Specifications, accessibility requirements and applicable standards				
	- Complete Accessible Toilet	item	1.00		
	<u>Rate or Lump Sum in Words:</u>				

Carried To Summary

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1490

Part-2 - Mechanical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
1	<u>GENERAL TECHNICAL REQUIREMENTS</u>				
1.1	<u>General Mechanical Requirements</u>				
1.1.2	Prepare the shop drawings for all mechanical works (where needed) and obtain approval from the Engineer before the start of executing any work. <i>Rate or Lump Sum in Words:</i>	Item	1.00		
1.2	<u>Rehabilitation Works General Requirements</u> Provide all necessary rehabilitation works and make all Mechanical systems in good condition complete including maintenance, cleaning, relocation works, replacing damaged items and equipment, removing and carting away resulting materials and equipment, testing and commissioning, and all other related works to ensure all Mechanical systems are properly working and functional.				
1.2.1	Maintenance and rehabilitation of existing plumbing works, including sanitary fixtures, changing Wc Covers, floor drains, roof drains, manholes, pumps, WC tanks, adding where applicable all necessary valves, flush valves, Traps, Elbow ...etc. removing newly installed showers, and all other necessary works. <i>Rate or Lump Sum in Words:</i>	Item	1.00		

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Lebanon Emergency Assistance Project (LEAP)
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Part-2 - Mechanical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
2	<u>SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION</u>				
2.1	<u>Drainage System</u> Supply, install and test the storm water drainage from (UPVC) pipes inside the building to outside and the pipes to be measured in Linear Meter with all related accessories, cleanout, elbows, vent hangers, and all necessary accessories as per standard installation details				
2.1.1	Ø 50 mm / UPVC <i>Rate or Lump Sum in Words:</i>	m			
2.1.2	Ø 75 mm / UPVC <i>Rate or Lump Sum in Words:</i>	m			
2.1.3	Ø 110 mm / UPVC <i>Rate or Lump Sum in Words:</i>	m			
2.2	<u>Floor Drain</u> Supply and install floor drain P.V.C. with chrome plated brass drain cover and to be the same level as the floor and do all necessary installation and connections. This includes all civil works and connection to the proper floor pipes and as per the Engineer instructions				
2.2.1	FD-01: Ø75 mm bottom outlet <i>Rate or Lump Sum in Words:</i>	Nº			
2.3	<u>Drain Cover</u> Supply and install floor drain cover (P.E) or (similar to existing) 5 mm thick on drainage pipe and to be the same level of the floor tiling. Work to include all civil works and as per the				
2.3.1	Cover for FCO <i>Rate or Lump Sum in Words:</i>	Nº			

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Lebanon Emergency Assistance Project (LEAP)
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Part-2 - Mechanical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
3	<u>WATER PIPE WORK INSTALLATION</u>				
3.1	<u>Water Tanks</u> Supply & install polyethylene water tank (3 layers) or more with all necessary supply and over flow connections all as per the Engineer instructions				
3.1.2	2000 liters PE water tank <i>Rate or Lump Sum in Words:</i>	No			

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Part-2 - Mechanical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
5	<u>SANITARY FIXTURES</u>				
5.1	<u>W.C. for Kids</u> Supply and install K.G. W.C. Flush valve with cover as manufactured by Duravit - Bambi No. 018509 or approved equal, or similar to existing, 35 cm height max. from finished floor with timber cover. Cost to include all related connections angle valves and necessary accessories as per the Engineer instructions. Each W.C. should be equipped with a Flushing Hose (Grohe or Ideal standard or approved equal, or similar to existing)				
5.1.1	EWC-03 (Wall Hang - 52 x 32 cm) <i>Rate or Lump Sum in Words:</i>	Nº			
5.2	<u>W.C. For Non Kids</u> Supply and install W.C. for non kids, Flush valve with cover as manufactured by Ideal Standard Item No. E876801 also the hose, or approved equal, or similar to existing, and to be 40 cm from floor finish with timber cover. The work to include the installation, liking, cleaning with all necessary connection, angle valves and necessary accessories similar to the K.G.W.C. Each W.C. should be equipped with a Flushing Hose (Grohe or Ideal standard or approved equal, or similar to existing)				
5.2.1	EWC-01 (Wall Hang - 52 x 36 cm) or as existing <i>Rate or Lump Sum in Words:</i>	Nº			
5.2.3	AWC-01 (Asian water closet) <i>Rate or Lump Sum in Words:</i>	Nº			

Carried To Collection

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1490

Part-2 - Mechanical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
5.3	<u>Lavatories for Kids in the K.G.</u> Supply and install semi pedestal wash basin similar to Ideal Standard No. 742001 or approved equal, or similar to existing, 45 x 36 cm, and fixed at 60 cm high from the floor finish. Cost to include all necessary connections, angle valves and accessories as required				
5.3.1	LAV-03 (semi-pedestal wash basin - 45 x 35 cm) <i>Rate or Lump Sum in Words:</i>	Nº			
5.4	<u>Lavatories for Non Kids</u> Supply and install semi pedestal wash basin similar to Ideal Standard No. 742001 or approved equal, or similar to existing, and fixed at 82 cm high from the floor finish. Cost to include all necessary connections, angle valves, traps and necessary accessories as specified.				
5.4.1	LAV-01 (semi-pedestal with mixers 55 x 45 cm) <i>Rate or Lump Sum in Words:</i>	Nº	2.00		
5.6	<u>Self Close Taps on Kids & Students Lavatories</u> Supply and install self close taps to be fixed in the lavatory body as manufactured by Grohe Item No. 36-173, or similar to existing, with all required works and drain accessories including trap, to be connected to the new water supply and drain and as instructed by the Engineer				
5.6.1	Self Close Taps <i>Rate or Lump Sum in Words:</i>	Nº	1.00		
5.7	<u>Wall Type Self Close Taps on Drinking Basins</u> Supply and install self close taps to be fixed in the drinking basin body as manufactured by Grohe Item No. 36-176, or similar to existing, with all required works and drain accessories including trap and to be connected to the new water supply and drain and as instructed by the Engineer				
5.7.1	Wall Type Self Close Taps <i>Rate or Lump Sum in Words:</i>	Nº	2.00		
Carried To Summary					

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1490

Part-3 - Electrical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
1	<u>BASIC ELECTRICAL REQUIREMENTS</u>				
	The Contractor should revise all the drawings and compare them with the site conditions and redo all the design works with the necessary calculations for all the electrical installations and works. Moreover, the Contractor should submit shop drawings and as-built drawings for the maintenance use in the future. The contractor should provide all the necessary maintenance works for all Electrical systems related to the KG school to ensure its proper works. At the end of the project, the contractor should submit complete As-Built Drawings for all executed works with exact dimensions & sizes for easy maintenance work in the future.				
1.1	<u>Fixing and Repairing</u>				
	Check & repair all the existing cables, wires, socket outlets, lighting fixtures, lighting switches, electric fans, and protect all exposed wiring as per the site conditions, and to the satisfaction of the Engineer. All as per the drawings, specifications and Engineer instructions				
1.1.1	Lighting fixtures	LS	1.00		
	<i>Rate or Lump Sum in Words:</i>				
1.1.2	Wires and cables	LS	1.00		
	<i>Rate or Lump Sum in Words:</i>				
1.1.3	Sockets and switches	LS	1.00		
	<i>Rate or Lump Sum in Words:</i>				
1.1.4	Circuit breakers	LS	1.00		
	<i>Rate or Lump Sum in Words:</i>				
1.1.5	Disconnecting switches	LS	1.00		
	<i>Rate or Lump Sum in Words:</i>				

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1490

Part-3 - Electrical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
1.1.6	Electrical panel boards with grounding <i>Rate or Lump Sum in Words:</i>	LS	1.00		
1.1.9	All needed electrical works ... etc. <i>Rate or Lump Sum in Words:</i>	LS	1.00		

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1490

Part-3 - Electrical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
2	<u>PANELBOARDS</u>				
2.1	Supply, install or rehabilitate the existing panel board if possible including enclosures, busbars, protective devices, MCB & MCCB breakers according to IEC-60947-2 as per the site conditions and Engineer instructions.				
2.1.1	MDB	Nº			
	<i>Rate or Lump Sum in Words:</i>				
					
					

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1490

Part-3 - Electrical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
3	<u>GENERAL LIGHTING INSTALLATIONS</u>				
3.1	<u>Lighting Fixtures</u> Supply, install and test the lighting fixtures complete with all the necessary wires conduits, boxes and accessories required to provide power to each lighting fitting from LP including the earth wire as per the drawings, specifications and Engineer instructions. The Contractor should submit samples of each lighting fixture for approval.				
3.1.1	TYPE C1: Twin T8 LED Tube, surface-mount luminaire for interior, 40W, 4000K, 4700Lm. Polycarbonate, light grey, with injected polyurethane double gasket and clear UV stabilized polycarbonate cover, $\cos \phi \geq 0.9$, or similar to existing.	Nº	16.00		
	<i>Rate or Lump Sum in Words:</i>				
3.1.4	TYPE A2 / A3: 600x600 mm LED Panel 3600lm, 33W, 4000K, 80CRI surface-mount/recessed, die-cast aluminum, IP20, or similar to existing.	Nº			
	<i>Rate or Lump Sum in Words:</i>				
3.1.6	TYPE N4 / N3: LED - 900lm - 12.5W - 3000K - 80CRI - WW Surface mounted / Recessed Downlight Round - 120 deg, or similar to existing.	Nº	27.00		
	<i>Rate or Lump Sum in Words:</i>				

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1490

Part-3 - Electrical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
10	<u>LIFTS REHABILITATION</u>				
10.1	Rehabilitation of the existing lift as described in specification, including all coordination, design, execution drawing and details, security of the personnel, scaffolding, labor and equipment necessary for the perfect operation of the lift and to the satisfaction of the engineer				
	Cost to include 5 years maintenance contract with all necessary spare parts and all as needed.				
	For 2 hours (fire rated) having the following characteristics:				
	Capacity: as per existing				
	Speed: as per existing				
	Entrance size/ type: as per site dimensions				
	Opening as per existing	No			
	<u>Rate or Lump Sum in Words:</u>				
					
					

Carried To Summary

Bill of Quantities - Lot-3 - School CERD: 1550
El Awadeh Public School

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1550

Summary

<u>Description</u>	<u>Amount (US \$)</u>
Part-1 - Civil, Structural and Architectural Works	
Part-2 - Mechanical Engineering Services	
Part-3 - Electrical Engineering Services	
	
* Total Amount of Bill of Quantities	
* Discount by Tenderer (_____ %)	
	
	
* Total Amount of Tender (VAT Not Applicable)	
	
	
* Total Amount of Tender in Words:	
.....	
.....	
.....	

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1550

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
1	<u>SITE PREPARATION AND DEMOLITION</u>				
1.1	<u>Demolishing and Removal of Debris</u>				
1.1.1	The works include all types of demolition and the removal of debris and damaged elements such but not limited to, the following: - Existing plastering and concrete items such as foundations, columns, slabs, etc. - Damaged Tiling (floors and walls) - Toilet fixtures and pipes installation of all sizes - Counter tops, bases and sinks - Water tanks of different types - Hollow concrete block walls or concrete walls of all sizes - Demolition of the existing ramps / Stairs and the execution of the given plans and specifications - Including the necessary equipment for the removal of debris and all resulting materials - etc.	LS	1.00		
	<u>Rate or Lump Sum in Words:</u>				

Carried To Collection

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1550

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
	<i>From Collection</i>				
2	<u>SITE PREPARATION AND DEMOLITION</u>				
2.3	<u>Existing Walkways</u>				
2.3.1	Repair existing walkways at project site boundary; precast concrete paver tiles, bases courses, etc., as necessary, where damaged or distributed by new construction without affecting the adjacent undamaged areas; make good and joint at junction with new precast concrete paving and/or curbing as required and to Engineer's approval.	LS			
	<i>Rate or Lump Sum in Words:</i>				
2.5	<u>Ramp for External Existing Sidewalk or for accessibility purpose</u>				
2.5.1	Supply and install external pedestrian ramp as per approved shop drawing submitted by contractor Work to include: - Remove parts of sidewalk including curbstone and existing tiles - Remove the debris to outside the site - Submit detailed shop drawing compatible with ADA requirements - Supply and install concrete curbstone for the ramp - Supply and install floor tiles identical to the existing with mortar and all layers - All needed items as per the Engineer instructions	LS			
	<i>Rate or Lump Sum in Words:</i>				
2.9	<u>Rehabilitation of Playground Slabs (External Playground)</u>				
2.9.1	Clean the rehabilitated places by removing all debris and make good all the edges and remove all broken slabs & failed slabs and remove to outside the site all the debris & refused items, cast proper concrete in places where the removal of all debris (No patching is allowed for the existing concrete surfaces) Work to include: - Removal and cleaning the location - Materials, fill - Labors - Make good the surfaces - Lining and marking all playgrounds as per site instructions - All needed refurbishing works as per the Engineer instructions	m ²			
	<i>Rate or Lump Sum in Words:</i>				
	<i>Carried To Collection</i>				

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1550

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
3	<u>CONCRETE</u>				
3.2	Reinforced Concrete Footings, Tie Beams, Columns and Walls Drop - Parapete - Slab on Grade				
3.1.2	Supply, cast and vibrate concrete for footing, tie beams, walls, parapets. Up stand, drop parapets with a crushing strength 350kg/cm2, cost to includes: - Formwork - Steel reinforcement - All needed work as per Specifications and the Engineer instructions <i>Rate or Lump Sum in Words:</i>	m3			

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1550

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
4	<u>MASONRY</u>				
4.1	<u>Hollow or Solid Concrete Blocks and Claustra</u>				
	Supply and install concrete blocks as per drawings				
	Work to include:				
	- All places as per the drawings, and the Engineer instructions.				
	- Materials				
	- Cement mortar and the use of extruded nets and reinforcement by means of metal gates and the placement of angles of galvanized steel iron of concrete columns thickness of 4 mm every 60 cm				
	- Labors and all items needed and instructions by the Engineer				
4.1.2	10 cm hollow concrete blocks	m ²			
	<i>Rate or Lump Sum in Words:</i>				
					
					
4.1.4	15 cm hollow concrete blocks	m ²			
	<i>Rate or Lump Sum in Words:</i>				
					
					

Carried To Collection

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1550

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
	<i>From Collection</i>				
4.2	<u>Rehabilitate and Clean masonry walls showing deep crack</u> The repair method requires the replacement of some stone masonry that has been damaged by the crack. It will include the use of horizontal reinforcement. Remove cracked stones in a “toothed” pattern to the extent that a sound repair is possible. Clean the crack if it continues to extend into the mass masonry and grout with non shrink mortar. Key new stone in stone masonry perpendicular to the wall surface in addition to the “toothed” and stepped pattern parallel to the wall surface. With larger more extensive cracks remove additional stones in a stepped pattern on both sides and the top of crack and restore by installing new stones. With smaller repairs lesser amounts of stones will have to be removed. Place horizontal reinforcement every 5th course. Mechanical ties to secure geogrid may be required. The horizontal reinforcement shall bridge over the crack and extend the length of new stone masonry. Replicate the coursing pattern of the existing exposed surface. Place new stones that are not exposed in an alternating stretcher-header bonding pattern to wall surface or top of wall. Construct the new stone masonry in complete horizontal courses where possible. Do not construct more than 5 courses before allowing masonry to dry. Lay subsequent stone courses on fresh wet mortar. Apply mortar at head joints as well as bed joints and finish one-half the width of the mortar joint below the surface of the stones.				
4.2.1	<u>Rehabilitate Natural Stone Facades</u> Rehabilitate works on natural stone facades work should be by replacing the damaged stone and not filling with mortar. Work to include: - Determine location of damaged stone walls and location of dampness. Broken or damaged pieces to be replaced, then cleaning & leveling; without affecting the adjacent undamaged - Treat the dampness and the causes - Repair the stone by renewing the damaged and replace it with new ones with same stone and apply one layer of water proofing transparent paint - Clear the place and infill in between the coarse (Lining) - All works as instructed by the Engineer <i>Rate or Lump Sum in Words:</i>	m ²			
	<i>Carried To Collection</i>				

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1550

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
	<i>From Collection</i>				
5	<u>METAL WORKS</u>				
5.1	Provide New Steel Work (Door & Windows)				
5.1.1	Provide new steel doors with related accessories as per <i>Rate or Lump Sum in Words:</i>	Nº			
5.1.3	Provide new double glazed aluminum windows with new burglar proof protection <i>Rate or Lump Sum in Words:</i>	Nº			
5.2	<u>Rehabilitate and Maintain the Existing Steel Work (Burglar Proof Protection + Opening)</u> Rehabilitate the existing steel windows or doors as per specifications and drawings and the Engineer instruction Work to include: - Remove all damaged members and replace by new ones - Rub completely to secure all parts and use putty to make faces smooth - Apply two layers of anti rust paint - Apply putty - Apply three layers of epoxy external paint - All needed items as per the Engineer instructions				
5.2.1	Rehabilitate existing steel doors <i>Rate or Lump Sum in Words:</i>	Nº			
5.2.2	Rehabilitate existing steel gates <i>Rate or Lump Sum in Words:</i>	Nº	2.00		
5.2.4	Rehabilitate existing burglar proof steel protection <i>Rate or Lump Sum in Words:</i>	Nº			
5.2.5	Rehabilitate and paint existing steel louvers with related <i>Rate or Lump Sum in Words:</i>	Nº			
5.2.6	Rehabilitate and paint existing steel window / Curtain Wall <i>Rate or Lump Sum in Words:</i>	Nº			
	<i>Carried To Collection</i>				

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1550

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
5.3	<u>Rehabilitate Existing Steel Shed Works</u> Rehabilitate the existing steel elements of the existing shed and the work to include: - Remove existing cover (Asbestos, TOT, etc.) and to be dismantled and carted away to outside the site to dumps approved by municipality - Brick tiles to be disassembled and removed and stored in appropriate location as per engineer's instruction and to checked for reused if needed - Clean, rub and repaint all steel structure and do the necessary reinforcement - Damaged steel structure to be replaced with new steel structure similar to existing. - Support and add new beams similar to existing. - Remove existing paint & clean deeply as per SSPC code and ISO 8501 - Apply base and epoxy as specified - Supply the roof covers as per drawings - Install the galvanized steel gutter (No Welded) and all Steel pipe works - Corrugated Metal sheet flashing between walls and shed roof with mastic - All needed items as per the Engineer instructions				
5.3.1	Rehabilitate and strength steel sheds and replace existing sheet by insulated sandwich panel <i>Rate or Lump Sum in Words:</i>	m ²			
5.3.2	Rehabilitate and strength steel sheds and replace existing sheet by polycarbonate triple layer <i>Rate or Lump Sum in Words:</i>	m ²			
5.3.3	Rehabilitate and strength steel sheds and replace existing sheet by insulated sandwich panel with polycarbonate triple layer <i>Rate or Lump Sum in Words:</i>	m ²			
5.3.4	Rehabilitate and strength steel sheds and replace existing sheet by PVC sheet or as exisitng <i>Rate or Lump Sum in Words:</i>	m ²			
<i>Carried To Collection</i>					

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1550

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
5.3.5	Rehabilitate and strength steel sheds and replace existing sheet by brick tiles <i>Rate or Lump Sum in Words:</i>	m ²			
5.3.6	Rehabilitate and strength existing roof bricks and change broken bricks by new ones <i>Rate or Lump Sum in Words:</i>	m ²			
5.3.7	Rehabilitate connection between wall and corrugated roof, a new gutter to be Provided <i>Rate or Lump Sum in Words:</i>	m			
5.5	<u>Rehabilitate and Maintain Steel Handrail</u> - Rehabilitate the existing metal handrail and remove the damaged members and replace by new - Reinforce the existing handrail with similar members in addition to the rail and all necessary accessories - Remove existing paint & clean deeply as per SSPC code and ISO 8501 - Apply one layer of epoxy base paint - Apply putty - Apply epoxy paint as per specification All needed items as per the Engineer instructions				
5.5.1	Floor Mounted <i>Rate or Lump Sum in Words:</i>	m			
5.5.2	Wall Mounted <i>Rate or Lump Sum in Words:</i>	m			

Carried To Collection

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1550

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
6	<u>WOOD AND PLASTICS</u>				
6.1	<u>Joinery Works</u>				
6.1.1	<u>Rehabilitate Existing Kitchen Cupboards</u> Rehabilitate existing cupboards, cabinets, drawers, counters, etc., for the existing kitchen. Works to include replacing damaged elements, accessories, material, labor, equipment, maintaining support, change of the top of counter by new resin counter as specified, etc. As per engineer's approval.				
	- Repair wood elements in accordance with AWI Quality Standards requirements. - Repair framing and sash members with mortise and Tenon joints. Ensure joints and connections are flush, hairline, and weather-tight. - Scarf joints permitted when wood matches in color and grain texture. Form sills and stools in one piece. - Fabricate components with minimum clearances and shim spacing around perimeter of assembly, yet allowing installation and dynamic movement of perimeter seal.				
6.1.1.1	Kitchen Cupboards <i>Rate or Lump Sum in Words:</i>	m			

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1550

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
	<i>From Collection</i>				
7	<u>THERMAL AND MOISTURE PROTECTION</u>				
7.0	<u>Preliminaries</u>				
7.0.2	Dismantle and remove all existing materials on roof: Tiles, Membranes, existing water tanks, Mechanical Pumps and Systems, Electrical Systems, skirting, etc.; and all equipment as per engineer instructions The unwanted/ unused materials should be cart away from the site The remaining items should be reinstalled in a proper way as per engineering instructions <i>Rate or Lump Sum in Words:</i>	LS	1.00		
7.1	<u>Roof Waterproofing</u>				
7.1.1	Works should be applied and done by experts with previous experience in similar works. Works to include: - DEEP cleaning of all surfaces and carting away of dust & - Concrete pad for water tanks as indicated - Sand cement screed layer to Provide proper slopes minimum 0.75% - Expansion joint sealant to be done respecting back rod, unbonding tape, adequate thickness of sealant, type & finish of sealant (fire rated) & design drawings especially on roof & planters. - Provide tackle coat (Proper) - Provide 4mm thick, SBS layer from an approved manufacturer - Provide protection for all pipe works and drains - Provide heat insulation layers of 35 KG/m ³ where required - Provide Geotextile layers - Provide all aluminum flashing with mastic - Provide finishing material as required - All as specified and approved shop drawings <i>Rate or Lump Sum in Words:</i>	m ²			

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1550

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
8	<u>DOOR AND WINDOWS</u>				
8.1	<u>Wooden Doors and Windows</u>				
	Supply and install all timber work with all related items The joinery works should be of the first class type and as per specifications and drawings Work to include:				
	- Material and labors				
	- All accessories to be heavy duty (Hinged, Lock, Glass vision, as required, etc.)				
	- The frame for any width (Steel, Wood, etc.)				
	- Paint as follows:				
	- Anti rust layers				
	- Putty + one layer of undercoat				
	- Three layers of epoxy paint				
	- Apply and fix 6mm wired clear glass				
	- View Permitting glass opening where needed				
	- remove the existing timber panels				
	- repair the edges				
	- The Contractor should submit shop drawings				
	- All needed items as the Engineer instructions				
8.1.1	<u>Timber Doors</u>				
	Supply and install flush timber door as per drawings with laminated plastic facing and the door should have 10cm width frame between the plywood and fill with timber beads by tongue and groove each 5cm, and the door edges should behead wood and fixed by tongue and groove frames should be as specified, with fixed glass panel vision window, and similar to existing, and to the Engineer's instructions				
	- Works included, all accessories and fittings, pre-painting and finishing paint sides of doors and box frames.				
	- All works should be done as per the Engineer instructions				
8.1.1.1	Provide new double leaf wooden door	No			
	<u>Rate or Lump Sum in Words:</u>				
					
8.1.1.2	Provide new single leaf wooden door with view frame	No			
	<u>Rate or Lump Sum in Words:</u>				
					

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1550

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
	<i>From Collection</i>				
8.1.3	<u>Rehabilitate the Existing Timber Doors</u> As stated in the Preambles of Item 8.1 In addition, rehabilitate the existing timber doors: The minimum amount of existing timber should be removed to allow an effective repair to be formed. Cut out deteriorated area of timber in sloping splice to give optimum area of surface to be glued & fixed. Well-seasoned timber to be used in forming a repair with the line and density of grain (number of growth rings) of new timber matching the existing as closely as possible. For all joinery work, timber with shakes, fissures, warping, heartwood, sapwood or numerous/large knots should be avoided for use in repair. Always work new material to the line of the existing and avoid unnecessary trimming of original timber. Repairs should follow any existing deformations in the line of the wood element (e.g. door or window). Avoid mixing timber species between new and existing in a repair as joint between the two is likely to fail from different rates of expansion and contraction during dry & damp conditions. Where possible, spliced repairs to be designed to ensure moisture is towards the outer face of timber and that moisture does not lay on the repair joint. The length of the splice is governed by section of timber and the nature of component being repaired and it should be designed to ensure an effective bond between new and existing sections of timber. Where wood element are to be dismantled as part of the repair process, always mark and record the constituent parts before dismantling. similarly, number of glass panes/quarries before removal. If applicable carefully soften putty or remove wood trim and then remove glass. Use glue, to connect a new outer section of bottom rail to the existing sound timber. Drill and insert new wooden pins or fix using brass screws from inside. Casements or sashes are often in sound condition but the joints have become loose due to the break down of glue and loose wedges. The wedges will often be easily removable and will probably be unsuitable for re-use. It may be for the joints to be pulled together successfully. Attach door frame and shims to perimeter opening to accommodate construction tolerances & all irregularities. Align door plumb and level, free of warp or twist. Maintain dimensional tolerances and alignment with adjacent work. Install operating hardware.				
8.1.3.1.1	Rehabilitate and paint existing single leaf timber doors with related accessories <i>Rate or Lump Sum in Words:</i> <i>Carried To Collection</i>	Nº	8.00		

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1550

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
	<i>From Collection</i>				
8.1.3.1.2	Rehabilitate existing double leaf door <i>Rate or Lump Sum in Words:</i>	Nº			
8.1.3.1.4	Rehabilitate wooden windows <i>Rate or Lump Sum in Words:</i>	Nº			
8.2	<u>Aluminum Doors and Windows</u> Fabricate, supply and install aluminum works as manufactured by SIDEM 2000 first choice with all necessary accessories as per the drawings and the Engineer instructions, cost to include all doors and windows: - Reveals hard stone 3cm thick, all around for external opening - Apply EPDM around door and windows where necessary - Single glass 6 mm - Double glass 6-12-6 mm (Outer Glass should be Tempered) - Hinges and locks - Joint Filler - Mosquito Screen - Mesh - All items needed as per the Engineer instructions - All as specified and base on an approved shop drawings after exact dimensions				
8.2.1	<u>New Aluminum Panels (Double Glass)</u> Supply and install the fabricated aluminum panels with double glass (6 - 12 - 6 mm) (Outer Glass should be Tempered or similar to existing)				
8.2.1.1	Provide new aluminum double glazed window & door panel <i>Rate or Lump Sum in Words:</i>	Nº			
8.2.2	<u>New Aluminum Internal Door</u> Supply and install aluminum door with frame and related strengthening stud, Works to include: Materials, and accessories - Labors - All needed items as per the engineer instructions. - Repair all around the opening				
8.2.2.1	Provide new aluminum partition door as indicated. <i>Rate or Lump Sum in Words:</i>	Nº			
	<i>Carried To Collection</i>				

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1550

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
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From Collection

- 8.2.3 Rehabilitation Existing Glazed Aluminum Panels (s)**
Replacing Broken Glass. Fixing Hardware Issues: Check the functionality of latches, hinges, and other hardware. If any parts are broken, replace them with new ones to ensure the window operates smoothly. After repairs, apply a high-quality sealant around the edges to prevent moisture intrusion. If the paint is peeling or faded, consider repainting the frame with a metal paint formulated for aluminum to enhance durability and appearance.

- 8.2.3.1 Rehabilitate existing windows, doors and gates No
Rate or Lump Sum in Words:
.....
.....

Carried To Collection

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

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Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
9	<u>FINISHES</u>				
9.1	<u>Cement Plaster</u>				
	Supply and install sand cement plaster on concrete and block wall surfaces as specified The plaster layer should be own a base rough layer The plaster works should be on level points and each point should be at 1.5 m from the second only Work to include: - Materials and accessories (galvanized, wire mesh, cover beds, etc.) - Labors - All addition watering - All tools - Plaster thickness more than 2 cm - All needed items as per drawings and the Engineer instructions				
9.1.1	<u>Internal and External Plaster Works</u>				
9.1.1.1	Supply and apply one layer of sand cement plaster over a rough textured layer of plaster Price included all accessories, material, scaffolding and labor, etc. <i>Rate or Lump Sum in Words:</i>	m ²			

Carried To Collection

**Lebanon Emergency Assistance Project (LEAP)
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Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
From Collection					
9.1.2	<u>Repair of Existing Plaster (Internal - External) (Cracks,</u>				
9.1.2.1	Rehabilitate and repair cracked and damaged plaster indoor and outdoor Work to include: - Determine the location and remove all loose items around the area - Remove the cracked plaster layer - Remove the pulled out layers - Clean the places with suitable materials - Fill all cracks after widening by (No Suggestions) or approved equal. - Remove loose and other deteriorated materials prior to the new repair. Take special care not to damage the adjacent original materials. Prepare mortar joints for installation of lateral reinforcement where it is required. Use thin steel bars to clean joints to maximum depth possible. Remove loose mortar. Mix mortar with minimal amount of water (potable) prior to use. All separation cracks between perpendicular walls shall be filled grout to reduce additional movement from wind loads and thermal expansion-contraction. - Clear debris from crack by probing, brushing, and blowing. - Force non-shrink mortar mixture into crack as deep as possible with hands, wood and metal probes. Use as dry a mix as possible. Use stone bats to fill larger crack voids. Ensure mortar is forced into smaller/deeper cracks. Mortar grout will be fluid in order to flow into crack. Either grout bags or gravity flow shall be used depending on the conditions. Fil Protect repairs from rapid drying by misting, shading, protecting from dry wind cracks in a series of applications rather than one large application. Final application shall not be flush with the surface, but shall be one half the width of the crack below the surface. Remove all tool marks with brush. - Apply the finish rough plaster layer - Install galvanized steel mesh 20 cm width at least - Apply the second smooth plaster layer	LS	1.00		
Rate or Lump Sum in Words:					

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Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1550

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
9.2	<u>Tiling Works</u> Supply and install all tiling items for floors, with the skirting Work to include all materials and labors and the Contractor should use all necessary rods and levels as per the Engineer instructions Price to include: - Sand below tiles - Materials, tiles, mortars - Labors - Rubbing - Filling between tiles - Filling the skirting - Remove unsuitable items - Cleaning the places - All needed items as per the Engineer instructions				
9.2.1	<u>New Full Mass Colored Ceramic for Floors</u> Ceramic tiles and tilework as specified and detailed, installed complete; Including for substrate preparation, cement: sand screeds or plaster backing coats; setting, jointing and grouting; tile trim and accessories; sealants; and all other related ancillaries as indicated or required				
9.2.1.1	Supply and install anti skid colored full mass ceramic tiles for classroom (first choice) for all floor toilets, kitchen and laboratory (existing and new) or similar to existing <i>Rate or Lump Sum in Words:</i> 	m ²			
9.2.1.2	Skirting same type of floors or similar to existing <i>Rate or Lump Sum in Words:</i> 	m			
9.2.2	<u>New Glazed Colored Ceramic for Walls</u>				
9.2.2.1	Supply and install glazed colored ceramic for walls Include Ceramic Corner (first choice as specified or similar to <i>Rate or Lump Sum in Words:</i> 	m ²			

Carried To Collection

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1550

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
9.2.3	<u>New Tiles for stairs</u> Supply and install tiles first choice for the new stair (treads 3cm thick - Risers 2cm thick) and landing - tiling 2cm and for all floors or otherwise specified color type and quality to be submitted for approval, works to include: - Labor, materials and installations - Under tile fill - Mortar - Lining - Step (Tread + riser) and landing and all type of skirting - And needed items to complete the works as per the Engineer instructions				
9.2.3.2	Granite 2cm Thick (Tread and Riser) <i>Rate or Lump Sum in Words:</i>	m			
9.2.3.3	Mosaic Similar to existing 4cm Thick minimum (Tread and Riser) <i>Rate or Lump Sum in Words:</i>	m			
9.2.4	<u>Repair existing broken floor tiles and skirting (all types) and reinstall by new, similar to existing for all rooms and</u> ..				
8.2.4.1	Rehabilitate and repair all damaged and broken tiles, and skirting for any type (marble - ceramic - mosaic - Cement). Remove broken or damaged pieces to be replaced without affecting the adjacent undamaged areas Work to include: - Remove all debris as specified - All materials and labors - Difference tiles (shapes thickness, dimension, pattern) as needed. - Cutting and repair - Grouting - Polish and rubbing - All needed items as per Engineer comments and complete to Engineer approval. <i>Rate or Lump Sum in Words:</i>	LS	1.00		
<i>Carried To Collection</i>					

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1550

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
9.2.5	<u>Rehabilitate Existing Stair Treads and Riser</u> Remove the broken treads and risers, install and supply new ones similar to the existing with the needed side bases, width as per site dimension with skirting and tiles for landing The work to be as per the Engineer instructions				
9.2.5.1	Existing Mosaic Stair the price including Skirting tiles & Landing <i>Rate or Lump Sum in Words:</i>	m			
9.2.6	<u>Threshold Tiles (Doors, Marble Topping)</u> Supply and install 3cm thick threshold as per the Engineer instructions Cost to include: - Fixing materials - All materials - All labors - All Edges must be rounded or chamfered - All needed items as per the Engineer instructions				
9.2.6.1	Natural Stone Threshold or similar to existing <i>Rate or Lump Sum in Words:</i>	m			
9.2.6.2	Marble Coping or similar to existing <i>Rate or Lump Sum in Words:</i>	m			
9.2.6.3	Natural Stone Coping or similar to existing <i>Rate or Lump Sum in Words:</i>	m			

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**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1550

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
9.2.7	<u>Clean and Rub the Existing Floor Tiles and Skirting</u> Rehabilitate any type of flooring tiles and skirting (ceramic - mosaic - etc.) Work to include: - All materials and labors - Grouting - Polish and rubbing - All needed items as per the Engineer instruction as specified				
9.2.7.1	Type 1: Marble or similar to existing <i>Rate or Lump Sum in Words:</i>	m ²			
9.2.7.2	Type 2: Ceramic or similar to existing <i>Rate or Lump Sum in Words:</i>	m ²			
9.2.7.3	Type 3: Mosaic or similar to existing <i>Rate or Lump Sum in Words:</i>	m ²			
9.3	<u>Suspended Ceilings</u> The suspended ceiling, work to include: - All panels - All heavy duty hangers and accessories as specified - Rails (hidden type) - Special metal heavy duty suspension systems - All needed heavy duty accessories and items to complete the works - Works to be indicated on drawings and as per the - Works should be coordinated between the starting and the end of the floor panels and also should be coordinated with the electromechanical units in the ceiling - All works should be as instructed by the Engineer				
9.3.1	<u>Metal Sheet Strips Suspended Ceilings:</u>				
9.3.1.3	Rehabilitate Metal Strips <i>Rate or Lump Sum in Words:</i>	m ²			

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Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1550

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
9.5	<u>Painting</u>				
9.5.1	<u>Wall and Ceilings Paint Works</u> Wall paint include preparation of the base surfaces to receive the paints and apply the specified layers of putty and paint from the best quality as per specifications and as indicated in drawings The base surfaces should be clean and smooth and free from any pulled out old paints before starting application of the specified primer/undercoat. Apply 2 layers of putty then after smoothening, then 3 layers of the approved paint materials. All works and items should be as per manufacturer recommendation, compatible with each other and as per the Engineer instructions and approval, <i>All paint types must be <u>lead-free</u> and <u>Low VOC</u> (Volatile Organic Compounds)</i>				
9.5.1.2	Super Rubber Paint for old walls and ceilings <i>Rate or Lump Sum in Words:</i>	m ²	490.00		
9.5.1.4	Oil Paints for old walls and ceilings <i>Rate or Lump Sum in Words:</i>	m ²	490.00		
9.5.2	<u>Outside Walls Paint (Old and New Walls and Ceilings)</u>				
9.5.2.1	Paint for external old and new walls, smooth touch Work to include: - Removal of any paint or obstacle - Rehabilitate the surfaces and make them goods - Polyurethane where needed for cracks - Apply one coat of undercoat - Apply 2 coats of external paint or rolled textured paint - Apply one layer of external transparent paint (acrylic styrene copolymer elastic water proof) - All needed scaffolding and materials for the best execution of the works - All works and items should be as per manufacturer and the Engineer instructions and approval. <i>Rate or Lump Sum in Words:</i>	m ²			
<i>Carried To Collection</i>					

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

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Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
10	<u>SPECIALTIES</u>				
10.1	<u>Bathrooms Accessories</u>				
	- Remove and cart away old damaged fixtures				
	- Supply and install all needed accessories and make good their places and their surroundings				
	- Place all frame, cover joints (stainless steel) anti-corrosion				
	- Install items and their contact with the surfaces				
	- All works should be done as per the Engineer instructions				
10.1.2	<u>Soap Dispenser</u>				
10.1.2.1	Supply and install stainless steel 316 no rust, no stain, soap dispenser wall type fixation (anti-rust materials and accessories) with all needed items or similar to existing				
	All works should be done as the Engineer instructions	No			
	<i>Rate or Lump Sum in Words:</i>				
					
10.1.4	<u>Mirror for Lavatories</u>				
	Supply and install 6mm glass mirror for lavatories with colored PVC frames as show on drawings and as stated in the specifications with all needed items and accessories or similar to existing				
	The mirror should be placed on 3mm thick plywood from the back				
	All works should be done as the Engineer instructions				
10.1.4.1	Mirror (Dimension as per site conditions and engineer instruction)	No			
	<i>Rate or Lump Sum in Words:</i>				
					

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Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
10.3	<u>Resin Work</u>				
10.3.1	<u>Drinking Basin</u>				
	Supply and install drinking basin as shown on drawings of resin layers 12 mm thick fixed on galvanized steel skeleton 4 x 4 cm hollow sections and as shown on drawings				
	Work to include:				
	- Materials				
	- Labors				
	- Galvanized steel skeleton				
	- All needed items and as instructed by the Engineer				
10.3.1.1	Drinking Basin -Length (up to 2.20 m)	Nº			
	<i>Rate or Lump Sum in Words:</i>				
					
10.3.1.5	Drinking Basin -Length (3.81 to 4.10 m)	Nº			
	<i>Rate or Lump Sum in Words:</i>				
					
10.3.1.6	Drinking Basin -Length (4.11 to 6.20 m)	Nº			
	<i>Rate or Lump Sum in Words:</i>				
					
10.3.2	<u>Lavatory Countertop</u>				
10.3.2.1	Supply and install complete counter for lavatories in toilets where shown on drawings to be of 12mm resin layer as per drawings and the work to include:				
	- All fixing elements				
	- All stainless steel hangers				
	- All necessary heavy duty accessories				
	- Counter edge of 30cm length				
	- All needed items and as instructed by the Engineer	m			
	<i>Rate or Lump Sum in Words:</i>				
					

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Lebanon Emergency Assistance Project (LEAP)
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Bill of Quantities - Lot-3 - School CERD: 1550

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
	<i>From Collection</i>				
10.3.4	<u>Kitchen Counter</u>				
	Supply and install complete counter resin type with sink (resin) for teachers' kitchen of 18mm thick including coved splash back 20cm height and the work to include:				
	- All fixing elements				
	- All stainless steel hangers				
	- All necessary accessories				
	- All needed items and as instructed by the Engineer				
10.3.4.2	Kitchen Counter - Length (1.11 to 1.75m)	No			
	<u>Rate or Lump Sum in Words:</u>				
10.8	<u>Complete Accessible Toilet</u>				
10.8.1	Supply, construct, install, test and commission one complete accessible toilet, including all necessary civil, architectural, plumbing and ventilation works, fully coordinated and ready for use. The item shall include, but not be limited to, hollow concrete block walls, cement plaster and painting, ceramic floor and wall tiles, PU waterproofing, complete water supply piping and connections, complete drainage piping and connections, accessible WC and washbasin/lavatory, all required sanitary fittings and accessories, grab bars and other accessibility provisions, ventilation system, and external-grade plastic laminate door with all required ironmongery and fittings.				
	The Contractor shall verify all dimensions, levels, access requirements and existing site conditions prior to commencement of works and shall ensure that the toilet dimensions and layout comply with applicable accessibility requirements and are suitably adapted to the actual location and site constraints.				
	The Contractor shall prepare and submit complete coordinated shop drawings, including plans, sections, elevations, dimensions, sanitary and plumbing layouts, accessibility provisions, door details and all relevant details, for the Engineer's review and approval prior to execution. The rate shall include all materials, labour, fittings, supports, connections, testing, making good and all other incidental works necessary to provide a complete, functional and fully operational accessible toilet in accordance with the approved shop drawings, Drawings, Specifications, accessibility requirements and applicable standards				
	- Complete Accessible Toilet	item			
	<u>Rate or Lump Sum in Words:</u>				

Carried To Summary

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1550

Part-2 - Mechanical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
1	<u>GENERAL TECHNICAL REQUIREMENTS</u>				
1.1	<u>General Mechanical Requirements</u>				
1.1.2	Prepare the shop drawings for all mechanical works (where needed) and obtain approval from the Engineer before the start of executing any work. <i>Rate or Lump Sum in Words:</i>	Item	1.00		
1.2	<u>Rehabilitation Works General Requirements</u> Provide all necessary rehabilitation works and make all Mechanical systems in good condition complete including maintenance, cleaning, relocation works, replacing damaged items and equipment, removing and carting away resulting materials and equipment, testing and commissioning, and all other related works to ensure all Mechanical systems are properly working and functional.				
1.2.1	Maintenance and rehabilitation of existing plumbing works, including sanitary fixtures, changing Wc Covers, floor drains, roof drains, manholes, pumps, WC tanks, adding where applicable all necessary valves, flush valves, Traps, Elbow ...etc. removing newly installed showers, and all other necessary works. <i>Rate or Lump Sum in Words:</i>	Item	1.00		

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1550

Part-2 - Mechanical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
2	<u>SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION</u>				
2.1	<u>Drainage System</u> Supply, install and test the storm water drainage from (UPVC) pipes inside the building to outside and the pipes to be measured in Linear Meter with all related accessories, cleanout, elbows, vent hangers, and all necessary accessories as per standard installation details				
2.1.1	Ø 50 mm / UPVC <i>Rate or Lump Sum in Words:</i>	m			
2.1.2	Ø 75 mm / UPVC <i>Rate or Lump Sum in Words:</i>	m			
2.1.3	Ø 110 mm / UPVC <i>Rate or Lump Sum in Words:</i>	m			
2.2	<u>Floor Drain</u> Supply and install floor drain P.V.C. with chrome plated brass drain cover and to be the same level as the floor and do all necessary installation and connections. This includes all civil works and connection to the proper floor pipes and as per the Engineer instructions				
2.2.1	FD-01: Ø75 mm bottom outlet <i>Rate or Lump Sum in Words:</i>	Nº			
2.3	<u>Drain Cover</u> Supply and install floor drain cover (P.E) or (similar to existing) 5 mm thick on drainage pipe and to be the same level of the floor tiling. Work to include all civil works and as per the				
2.3.1	Cover for FCO <i>Rate or Lump Sum in Words:</i>	Nº			

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Lebanon Emergency Assistance Project (LEAP)
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Bill of Quantities - Lot-3 - School CERD: 1550

Part-2 - Mechanical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
3	<u>WATER PIPE WORK INSTALLATION</u>				
3.1	<u>Water Tanks</u> Supply & install polyethylene water tank (3 layers) or more with all necessary supply and over flow connections all as per the Engineer instructions				
3.1.2	2000 liters PE water tank <i>Rate or Lump Sum in Words:</i>	No			

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**Lebanon Emergency Assistance Project (LEAP)
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Bill of Quantities - Lot-3 - School CERD: 1550

Part-2 - Mechanical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
5	<u>SANITARY FIXTURES</u>				
5.1	<u>W.C. for Kids</u> Supply and install K.G. W.C. Flush valve with cover as manufactured by Duravit - Bambi No. 018509 or approved equal, or similar to existing, 35 cm height max. from finished floor with timber cover. Cost to include all related connections angle valves and necessary accessories as per the Engineer instructions. Each W.C. should be equipped with a Flushing Hose (Grohe or Ideal standard or approved equal, or similar to existing)				
5.1.1	EWC-03 (Wall Hang - 52 x 32 cm) <i>Rate or Lump Sum in Words:</i>	Nº			
5.2	<u>W.C. For Non Kids</u> Supply and install W.C. for non kids, Flush valve with cover as manufactured by Ideal Standard Item No. E876801 also the hose, or approved equal, or similar to existing, and to be 40 cm from floor finish with timber cover. The work to include the installation, liking, cleaning with all necessary connection, angle valves and necessary accessories similar to the K.G.W.C. Each W.C. should be equipped with a Flushing Hose (Grohe or Ideal standard or approved equal, or similar to existing)				
5.2.1	EWC-01 (Wall Hang - 52 x 36 cm) or as existing <i>Rate or Lump Sum in Words:</i>	Nº			
5.2.3	AWC-01 (Asian water closet) <i>Rate or Lump Sum in Words:</i>	Nº			

Carried To Collection

**Lebanon Emergency Assistance Project (LEAP)
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Bill of Quantities - Lot-3 - School CERD: 1550

Part-2 - Mechanical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
5.3	<u>Lavatories for Kids in the K.G.</u> Supply and install semi pedestal wash basin similar to Ideal Standard No. 742001 or approved equal, or similar to existing, 45 x 36 cm, and fixed at 60 cm high from the floor finish. Cost to include all necessary connections, angle valves and accessories as required				
5.3.1	LAV-03 (semi-pedestal wash basin - 45 x 35 cm) <i>Rate or Lump Sum in Words:</i>	Nº			
5.4	<u>Lavatories for Non Kids</u> Supply and install semi pedestal wash basin similar to Ideal Standard No. 742001 or approved equal, or similar to existing, and fixed at 82 cm high from the floor finish. Cost to include all necessary connections, angle valves, traps and necessary accessories as specified.				
5.4.1	LAV-01 (semi-pedestal with mixers 55 x 45 cm) <i>Rate or Lump Sum in Words:</i>	Nº			
5.6	<u>Self Close Taps on Kids & Students Lavatories</u> Supply and install self close taps to be fixed in the lavatory body as manufactured by Grohe Item No. 36-173, or similar to existing, with all required works and drain accessories including trap, to be connected to the new water supply and drain and as instructed by the Engineer				
5.6.1	Self Close Taps <i>Rate or Lump Sum in Words:</i>	Nº			
5.7	<u>Wall Type Self Close Taps on Drinking Basins</u> Supply and install self close taps to be fixed in the drinking basin body as manufactured by Grohe Item No. 36-176, or similar to existing, with all required works and drain accessories including trap and to be connected to the new water supply and drain and as instructed by the Engineer				
5.7.1	Wall Type Self Close Taps <i>Rate or Lump Sum in Words:</i>	Nº			
Carried To Summary					

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1550

Part-3 - Electrical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
1	<u>BASIC ELECTRICAL REQUIREMENTS</u>				
	The Contractor should revise all the drawings and compare them with the site conditions and redo all the design works with the necessary calculations for all the electrical installations and works. Moreover, the Contractor should submit shop drawings and as-built drawings for the maintenance use in the future. The contractor should provide all the necessary maintenance works for all Electrical systems related to the KG school to ensure its proper works. At the end of the project, the contractor should submit complete As-Built Drawings for all executed works with exact dimensions & sizes for easy maintenance work in the future.				
1.1	<u>Fixing and Repairing</u>				
	Check & repair all the existing cables, wires, socket outlets, lighting fixtures, lighting switches, electric fans, and protect all exposed wiring as per the site conditions, and to the satisfaction of the Engineer. All as per the drawings, specifications and Engineer instructions				
1.1.1	Lighting fixtures	LS	1.00		
	<i>Rate or Lump Sum in Words:</i>				
1.1.2	Wires and cables	LS	1.00		
	<i>Rate or Lump Sum in Words:</i>				
1.1.3	Sockets and switches	LS	1.00		
	<i>Rate or Lump Sum in Words:</i>				
1.1.4	Circuit breakers	LS	1.00		
	<i>Rate or Lump Sum in Words:</i>				
1.1.5	Disconnecting switches	LS	1.00		
	<i>Rate or Lump Sum in Words:</i>				

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
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Bill of Quantities - Lot-3 - School CERD: 1550

Part-3 - Electrical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
1.1.6	Electrical panel boards with grounding <i>Rate or Lump Sum in Words:</i>	LS	1.00		
1.1.9	All needed electrical works ... etc. <i>Rate or Lump Sum in Words:</i>	LS	1.00		

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Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1550

Part-3 - Electrical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
2	<u>PANELBOARDS</u>				
2.1	Supply, install or rehabilitate the existing panel board if possible including enclosures, busbars, protective devices, MCB & MCCB breakers according to IEC-60947-2 as per the site conditions and Engineer instructions.				
2.1.1	MDB	Nº			
	<i>Rate or Lump Sum in Words:</i>				
					
					

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1550

Part-3 - Electrical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
3	<u>GENERAL LIGHTING INSTALLATIONS</u>				
3.1	<u>Lighting Fixtures</u> Supply, install and test the lighting fixtures complete with all the necessary wires conduits, boxes and accessories required to provide power to each lighting fitting from LP including the earth wire as per the drawings, specifications and Engineer instructions. The Contractor should submit samples of each lighting fixture for approval.				
3.1.1	TYPE C1: Twin T8 LED Tube, surface-mount luminaire for interior, 40W, 4000K, 4700Lm. Polycarbonate, light grey, with injected polyurethane double gasket and clear UV stabilized polycarbonate cover, $\cos \phi \geq 0.9$, or similar to existing.	Nº			
	<i>Rate or Lump Sum in Words:</i>				
3.1.4	TYPE A2 / A3: 600x600 mm LED Panel 3600lm, 33W, 4000K, 80CRI surface-mount/recessed, die-cast aluminum, IP20, or similar to existing.	Nº	4.00		
	<i>Rate or Lump Sum in Words:</i>				
3.1.6	TYPE N4 / N3: LED - 900lm - 12.5W - 3000K - 80CRI - WW Surface mounted / Recessed Downlight Round - 120 deg, or similar to existing.	Nº			
	<i>Rate or Lump Sum in Words:</i>				

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1550

Part-3 - Electrical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
10	<u>LIFTS REHABILITATION</u>				
10.1	Rehabilitation of the existing lift as described in specification, including all coordination, design, execution drawing and details, security of the personnel, scaffolding, labor and equipment necessary for the perfect operation of the lift and to the satisfaction of the engineer				
	Cost to include 5 years maintenance contract with all necessary spare parts and all as needed.				
	For 2 hours (fire rated) having the following characteristics:				
	Capacity: as per existing				
	Speed: as per existing				
	Entrance size/ type: as per site dimensions				
	Opening as per existing	No			
	<u>Rate or Lump Sum in Words:</u>				
					
					

Carried To Summary

***Bill of Quantities - Lot-3 - School CERD: 1553
El Bkayieh Mixed Public School***

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1553

Summary

<u>Description</u>	<u>Amount (US \$)</u>
Part-1 - Civil, Structural and Architectural Works	
Part-2 - Mechanical Engineering Services	
Part-3 - Electrical Engineering Services	
* Total Amount of Bill of Quantities	
* Discount by Tenderer (_____ %)	
* Total Amount of Tender (VAT Not Applicable)	
* Total Amount of Tender in Words:	
.....	
.....	
.....	

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1553

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
1	<u>SITE PREPARATION AND DEMOLITION</u>				
1.1	<u>Demolishing and Removal of Debris</u>				
1.1.1	The works include all types of demolition and the removal of debris and damaged elements such but not limited to, the following: - Existing plastering and concrete items such as foundations, columns, slabs, etc. - Damaged Tiling (floors and walls) - Toilet fixtures and pipes installation of all sizes - Counter tops, bases and sinks - Water tanks of different types - Hollow concrete block walls or concrete walls of all sizes - Demolition of the existing ramps / Stairs and the execution of the given plans and specifications - Including the necessary equipment for the removal of debris and all resulting materials - etc. <u>Rate or Lump Sum in Words:</u> 	LS	1.00		

Carried To Collection

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1553

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
	<i>From Collection</i>				
2	<u>SITE PREPARATION AND DEMOLITION</u>				
2.3	<u>Existing Walkways</u>				
2.3.1	Repair existing walkways at project site boundary; precast concrete paver tiles, bases courses, etc., as necessary, where damaged or distributed by new construction without affecting the adjacent undamaged areas; make good and joint at junction with new precast concrete paving and/or curbing as required and to Engineer's approval.	LS			
	<i>Rate or Lump Sum in Words:</i>				
2.5	<u>Ramp for External Existing Sidewalk or for accessibility purpose</u>				
2.5.1	Supply and install external pedestrian ramp as per approved shop drawing submitted by contractor Work to include: - Remove parts of sidewalk including curbstone and existing tiles - Remove the debris to outside the site - Submit detailed shop drawing compatible with ADA requirements - Supply and install concrete curbstone for the ramp - Supply and install floor tiles identical to the existing with mortar and all layers - All needed items as per the Engineer instructions	LS			
	<i>Rate or Lump Sum in Words:</i>				
2.9	<u>Rehabilitation of Playground Slabs (External Playground)</u>				
2.9.1	Clean the rehabilitated places by removing all debris and make good all the edges and remove all broken slabs & failed slabs and remove to outside the site all the debris & refused items, cast proper concrete in places where the removal of all debris (No patching is allowed for the existing concrete surfaces) Work to include: - Removal and cleaning the location - Materials, fill - Labors - Make good the surfaces - Lining and marking all playgrounds as per site instructions - All needed refurbishing works as per the Engineer instructions	m ²			
	<i>Rate or Lump Sum in Words:</i>				
	<i>Carried To Collection</i>				

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1553

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
3	<u>CONCRETE</u>				
3.2	Reinforced Concrete Footings, Tie Beams, Columns and Walls Drop - Parapete - Slab on Grade				
3.1.2	Supply, cast and vibrate concrete for footing, tie beams, walls, parapets. Up stand, drop parapets with a crushing strength 350kg/cm2, cost to includes: - Formwork - Steel reinforcement - All needed work as per Specifications and the Engineer instructions <i>Rate or Lump Sum in Words:</i>	m3			

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1553

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
4	<u>MASONRY</u>				
4.1	<u>Hollow or Solid Concrete Blocks and Claustra</u> Supply and install concrete blocks as per drawings Work to include: - All places as per the drawings, and the Engineer instructions. - Materials - Cement mortar and the use of extruded nets and reinforcement by means of metal gates and the placement of angles of galvanized steel iron of concrete columns thickness of 4 mm every 60 cm - Labors and all items needed and instructions by the Engineer				
4.1.2	10 cm hollow concrete blocks <i>Rate or Lump Sum in Words:</i>	m ²			
4.1.4	15 cm hollow concrete blocks <i>Rate or Lump Sum in Words:</i>	m ²			

Carried To Collection

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1553

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
	<i>From Collection</i>				
4.2	<u>Rehabilitate and Clean masonry walls showing deep crack</u> The repair method requires the replacement of some stone masonry that has been damaged by the crack. It will include the use of horizontal reinforcement. Remove cracked stones in a “toothed” pattern to the extent that a sound repair is possible. Clean the crack if it continues to extend into the mass masonry and grout with non shrink mortar. Key new stone in stone masonry perpendicular to the wall surface in addition to the “toothed” and stepped pattern parallel to the wall surface. With larger more extensive cracks remove additional stones in a stepped pattern on both sides and the top of crack and restore by installing new stones. With smaller repairs lesser amounts of stones will have to be removed. Place horizontal reinforcement every 5th course. Mechanical ties to secure geogrid may be required. The horizontal reinforcement shall bridge over the crack and extend the length of new stone masonry. Replicate the coursing pattern of the existing exposed surface. Place new stones that are not exposed in an alternating stretcher-header bonding pattern to wall surface or top of wall. Construct the new stone masonry in complete horizontal courses where possible. Do not construct more than 5 courses before allowing masonry to dry. Lay subsequent stone courses on fresh wet mortar. Apply mortar at head joints as well as bed joints and finish one-half the width of the mortar joint below the surface of the stones.				
4.2.1	<u>Rehabilitate Natural Stone Facades</u> Rehabilitate works on natural stone facades work should be by replacing the damaged stone and not filling with mortar. Work to include: - Determine location of damaged stone walls and location of dampness. Broken or damaged pieces to be replaced, then cleaning & leveling; without affecting the adjacent undamaged - Treat the dampness and the causes - Repair the stone by renewing the damaged and replace it with new ones with same stone and apply one layer of water proofing transparent paint - Clear the place and infill in between the coarse (Lining) - All works as instructed by the Engineer <i>Rate or Lump Sum in Words:</i> <i>Carried To Collection</i>	m ²			

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1553

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
	<i>From Collection</i>				
5	<u>METAL WORKS</u>				
5.1	Provide New Steel Work (Door & Windows)				
5.1.1	Provide new steel doors with related accessories as per <i>Rate or Lump Sum in Words:</i>	Nº			
5.1.3	Provide new double glazed aluminum windows with new burglar proof protection <i>Rate or Lump Sum in Words:</i>	Nº			
5.2	<u>Rehabilitate and Maintain the Existing Steel Work (Burglar Proof Protection + Opening)</u> Rehabilitate the existing steel windows or doors as per specifications and drawings and the Engineer instruction Work to include: - Remove all damaged members and replace by new ones - Rub completely to secure all parts and use putty to make faces smooth - Apply two layers of anti rust paint - Apply putty - Apply three layers of epoxy external paint - All needed items as per the Engineer instructions				
5.2.1	Rehabilitate existing steel doors <i>Rate or Lump Sum in Words:</i>	Nº	3.00		
5.2.2	Rehabilitate existing steel gates <i>Rate or Lump Sum in Words:</i>	Nº	2.00		
5.2.4	Rehabilitate existing burglar proof steel protection <i>Rate or Lump Sum in Words:</i>	Nº			
5.2.5	Rehabilitate and paint existing steel louvers with related <i>Rate or Lump Sum in Words:</i>	Nº			
5.2.6	Rehabilitate and paint existing steel window / Curtain Wall <i>Rate or Lump Sum in Words:</i>	Nº			
	<i>Carried To Collection</i>				

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1553

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
5.3	<u>Rehabilitate Existing Steel Shed Works</u> Rehabilitate the existing steel elements of the existing shed and the work to include: - Remove existing cover (Asbestos, TOT, etc.) and to be dismantled and carted away to outside the site to dumps approved by municipality - Brick tiles to be disassembled and removed and stored in appropriate location as per engineer's instruction and to checked for reused if needed - Clean, rub and repaint all steel structure and do the necessary reinforcement - Damaged steel structure to be replaced with new steel structure similar to existing. - Support and add new beams similar to existing. - Remove existing paint & clean deeply as per SSPC code and ISO 8501 - Apply base and epoxy as specified - Supply the roof covers as per drawings - Install the galvanized steel gutter (No Welded) and all Steel pipe works - Corrugated Metal sheet flashing between walls and shed roof with mastic - All needed items as per the Engineer instructions				
5.3.1	Rehabilitate and strength steel sheds and replace existing sheet by insulated sandwich panel <i>Rate or Lump Sum in Words:</i>	m ²			
5.3.2	Rehabilitate and strength steel sheds and replace existing sheet by polycarbonate triple layer <i>Rate or Lump Sum in Words:</i>	m ²			
5.3.3	Rehabilitate and strength steel sheds and replace existing sheet by insulated sandwich panel with polycarbonate triple layer <i>Rate or Lump Sum in Words:</i>	m ²			
5.3.4	Rehabilitate and strength steel sheds and replace existing sheet by PVC sheet or as exisitng <i>Rate or Lump Sum in Words:</i>	m ²			
<i>Carried To Collection</i>					

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1553

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
5.3.5	Rehabilitate and strength steel sheds and replace existing sheet by brick tiles <i>Rate or Lump Sum in Words:</i>	m ²			
5.3.6	Rehabilitate and strength existing roof bricks and change broken bricks by new ones <i>Rate or Lump Sum in Words:</i>	m ²			
5.3.7	Rehabilitate connection between wall and corrugated roof, a new gutter to be Provided <i>Rate or Lump Sum in Words:</i>	m			
5.5	<u>Rehabilitate and Maintain Steel Handrail</u> - Rehabilitate the existing metal handrail and remove the damaged members and replace by new - Reinforce the existing handrail with similar members in addition to the rail and all necessary accessories - Remove existing paint & clean deeply as per SSPC code and ISO 8501 - Apply one layer of epoxy base paint - Apply putty - Apply epoxy paint as per specification All needed items as per the Engineer instructions				
5.5.1	Floor Mounted <i>Rate or Lump Sum in Words:</i>	m			
5.5.2	Wall Mounted <i>Rate or Lump Sum in Words:</i>	m			

Carried To Collection

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1553

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
6	<u>WOOD AND PLASTICS</u>				
6.1	<u>Joinery Works</u>				
6.1.1	<u>Rehabilitate Existing Kitchen Cupboards</u> Rehabilitate existing cupboards, cabinets, drawers, counters, etc., for the existing kitchen. Works to include replacing damaged elements, accessories, material, labor, equipment, maintaining support, change of the top of counter by new resin counter as specified, etc. As per engineer's approval.				
	- Repair wood elements in accordance with AWI Quality Standards requirements. - Repair framing and sash members with mortise and Tenon joints. Ensure joints and connections are flush, hairline, and weather-tight. - Scarf joints permitted when wood matches in color and grain texture. Form sills and stools in one piece. - Fabricate components with minimum clearances and shim spacing around perimeter of assembly, yet allowing installation and dynamic movement of perimeter seal.				
6.1.1.1	Kitchen Cupboards <i>Rate or Lump Sum in Words:</i>	m			

Carried To Collection

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1553

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
	<i>From Collection</i>				
7	<u>THERMAL AND MOISTURE PROTECTION</u>				
7.0	<u>Preliminaries</u>				
7.0.2	Dismantle and remove all existing materials on roof: Tiles, Membranes, existing water tanks, Mechanical Pumps and Systems, Electrical Systems, skirting, etc.; and all equipment as per engineer instructions The unwanted/ unused materials should be cart away from the site The remaining items should be reinstalled in a proper way as per engineering instructions <i>Rate or Lump Sum in Words:</i>	LS	1.00		
7.1	<u>Roof Waterproofing</u>				
7.1.1	Works should be applied and done by experts with previous experience in similar works. Works to include: - DEEP cleaning of all surfaces and carting away of dust & - Concrete pad for water tanks as indicated - Sand cement screed layer to Provide proper slopes minimum 0.75% - Expansion joint sealant to be done respecting back rod, unbonding tape, adequate thickness of sealant, type & finish of sealant (fire rated) & design drawings especially on roof & planters. - Provide tackle coat (Proper) - Provide 4mm thick, SBS layer from an approved manufacturer - Provide protection for all pipe works and drains - Provide heat insulation layers of 35 KG/m ³ where required - Provide Geotextile layers - Provide all aluminum flashing with mastic - Provide finishing material as required - All as specified and approved shop drawings <i>Rate or Lump Sum in Words:</i>	m ²			

Carried To Collection

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1553

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
8	<u>DOOR AND WINDOWS</u>				
8.1	<u>Wooden Doors and Windows</u>				
	Supply and install all timber work with all related items The joinery works should be of the first class type and as per specifications and drawings Work to include:				
	- Material and labors				
	- All accessories to be heavy duty (Hinged, Lock, Glass vision, as required, etc.)				
	- The frame for any width (Steel, Wood, etc.)				
	- Paint as follows:				
	- Anti rust layers				
	- Putty + one layer of undercoat				
	- Three layers of epoxy paint				
	- Apply and fix 6mm wired clear glass				
	- View Permitting glass opening where needed				
	- remove the existing timber panels				
	- repair the edges				
	- The Contractor should submit shop drawings				
	- All needed items as the Engineer instructions				
8.1.1	<u>Timber Doors</u>				
	Supply and install flush timber door as per drawings with laminated plastic facing and the door should have 10cm width frame between the plywood and fill with timber beads by tongue and groove each 5cm, and the door edges should behead wood and fixed by tongue and groove frames should be as specified, with fixed glass panel vision window, and similar to existing, and to the Engineer's instructions				
	- Works included, all accessories and fittings, pre-painting and finishing paint sides of doors and box frames.				
	- All works should be done as per the Engineer instructions				
8.1.1.1	Provide new double leaf wooden door	N _o			
	<u>Rate or Lump Sum in Words:</u>				
					
8.1.1.2	Provide new single leaf wooden door with view frame	N _o			
	<u>Rate or Lump Sum in Words:</u>				
					

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1553

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
	<i>From Collection</i>				
8.1.3	<u>Rehabilitate the Existing Timber Doors</u> As stated in the Preambles of Item 8.1 In addition, rehabilitate the existing timber doors: The minimum amount of existing timber should be removed to allow an effective repair to be formed. Cut out deteriorated area of timber in sloping splice to give optimum area of surface to be glued & fixed. Well-seasoned timber to be used in forming a repair with the line and density of grain (number of growth rings) of new timber matching the existing as closely as possible. For all joinery work, timber with shakes, fissures, warping, heartwood, sapwood or numerous/large knots should be avoided for use in repair. Always work new material to the line of the existing and avoid unnecessary trimming of original timber. Repairs should follow any existing deformations in the line of the wood element (e.g. door or window). Avoid mixing timber species between new and existing in a repair as joint between the two is likely to fail from different rates of expansion and contraction during dry & damp conditions. Where possible, spliced repairs to be designed to ensure moisture is towards the outer face of timber and that moisture does not lay on the repair joint. The length of the splice is governed by section of timber and the nature of component being repaired and it should be designed to ensure an effective bond between new and existing sections of timber. Where wood element are to be dismantled as part of the repair process, always mark and record the constituent parts before dismantling. similarly, number of glass panes/quarries before removal. If applicable carefully soften putty or remove wood trim and then remove glass. Use glue, to connect a new outer section of bottom rail to the existing sound timber. Drill and insert new wooden pins or fix using brass screws from inside. Casements or sashes are often in sound condition but the joints have become loose due to the break down of glue and loose wedges. The wedges will often be easily removable and will probably be unsuitable for re-use. It may be for the joints to be pulled together successfully. Attach door frame and shims to perimeter opening to accommodate construction tolerances & all irregularities. Align door plumb and level, free of warp or twist. Maintain dimensional tolerances and alignment with adjacent work. Install operating hardware.				
8.1.3.1.1	Rehabilitate and paint existing single leaf timber doors with related accessories <i>Rate or Lump Sum in Words:</i> <i>Carried To Collection</i>	No	40.00		

**Lebanon Emergency Assistance Project (LEAP)
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Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
8.1.3.1.2	Rehabilitate existing double leaf door <i>Rate or Lump Sum in Words:</i>	Nº			
8.1.3.1.4	Rehabilitate wooden windows <i>Rate or Lump Sum in Words:</i>	Nº			
8.2	<u>Aluminum Doors and Windows</u> Fabricate, supply and install aluminum works as manufactured by SIDEM 2000 first choice with all necessary accessories as per the drawings and the Engineer instructions, cost to include all doors and windows: - Reveals hard stone 3cm thick, all around for external opening - Apply EPDM around door and windows where necessary - Single glass 6 mm - Double glass 6-12-6 mm (Outer Glass should be Tempered) - Hinges and locks - Joint Filler - Mosquito Screen - Mesh - All items needed as per the Engineer instructions - All as specified and base on an approved shop drawings after exact dimensions				
8.2.1	<u>New Aluminum Panels (Double Glass)</u> Supply and install the fabricated aluminum panels with double glass (6 - 12 - 6 mm) (Outer Glass should be Tempered or similar to existing)				
8.2.1.1	Provide new aluminum double glazed window & door panel <i>Rate or Lump Sum in Words:</i>	Nº			
8.2.2	<u>New Aluminum Internal Door</u> Supply and install aluminum door with frame and related strengthening stud, Works to include: Materials, and accessories - Labors - All needed items as per the engineer instructions. - Repair all around the opening				
8.2.2.1	Provide new aluminum partition door as indicated. <i>Rate or Lump Sum in Words:</i>	Nº			
<i>Carried To Collection</i>					

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1553

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
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From Collection

- 8.2.3 Rehabilitation Existing Glazed Aluminum Panels (s)**
Replacing Broken Glass. Fixing Hardware Issues: Check the functionality of latches, hinges, and other hardware. If any parts are broken, replace them with new ones to ensure the window operates smoothly. After repairs, apply a high-quality sealant around the edges to prevent moisture intrusion. If the paint is peeling or faded, consider repainting the frame with a metal paint formulated for aluminum to enhance durability and appearance.

8.2.3.1	Rehabilitate existing windows, doors and gates	Nº	4.00		
	<i>Rate or Lump Sum in Words:</i>				
					
					

Carried To Collection

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Bill of Quantities - Lot-3 - School CERD: 1553

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
9	<u>FINISHES</u>				
9.1	<u>Cement Plaster</u>				
	Supply and install sand cement plaster on concrete and block wall surfaces as specified The plaster layer should be own a base rough layer The plaster works should be on level points and each point should be at 1.5 m from the second only Work to include: - Materials and accessories (galvanized, wire mesh, cover beds, etc.) - Labors - All addition watering - All tools - Plaster thickness more than 2 cm - All needed items as per drawings and the Engineer instructions				
9.1.1	<u>Internal and External Plaster Works</u>				
9.1.1.1	Supply and apply one layer of sand cement plaster over a rough textured layer of plaster Price included all accessories, material, scaffolding and labor, etc. <i>Rate or Lump Sum in Words:</i>	m ²			

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
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Bill of Quantities - Lot-3 - School CERD: 1553

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
9.1.2	<u>Repair of Existing Plaster (Internal - External) (Cracks,</u>				
9.1.2.1	Rehabilitate and repair cracked and damaged plaster indoor and outdoor Work to include: - Determine the location and remove all loose items around the area - Remove the cracked plaster layer - Remove the pulled out layers - Clean the places with suitable materials - Fill all cracks after widening by (No Suggestions) or approved equal. - Remove loose and other deteriorated materials prior to the new repair. Take special care not to damage the adjacent original materials. Prepare mortar joints for installation of lateral reinforcement where it is required. Use thin steel bars to clean joints to maximum depth possible. Remove loose mortar. Mix mortar with minimal amount of water (potable) prior to use. All separation cracks between perpendicular walls shall be filled grout to reduce additional movement from wind loads and thermal expansion-contraction. - Clear debris from crack by probing, brushing, and blowing. - Force non-shrink mortar mixture into crack as deep as possible with hands, wood and metal probes. Use as dry a mix as possible. Use stone bats to fill larger crack voids. Ensure mortar is forced into smaller/deeper cracks. Mortar grout will be fluid in order to flow into crack. Either grout bags or gravity flow shall be used depending on the conditions. Fil Protect repairs from rapid drying by misting, shading, protecting from dry wind cracks in a series of applications rather than one large application. Final application shall not be flush with the surface, but shall be one half the width of the crack below the surface. Remove all tool marks with brush. - Apply the finish rough plaster layer - Install galvanized steel mesh 20 cm width at least - Apply the second smooth plaster layer	LS	1.00		
	<u>Rate or Lump Sum in Words:</u>				
					

Carried To Collection

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1553

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
9.2	<u>Tiling Works</u> Supply and install all tiling items for floors, with the skirting Work to include all materials and labors and the Contractor should use all necessary rods and levels as per the Engineer instructions Price to include: - Sand below tiles - Materials, tiles, mortars - Labors - Rubbing - Filling between tiles - Filling the skirting - Remove unsuitable items - Cleaning the places - All needed items as per the Engineer instructions				
9.2.1	<u>New Full Mass Colored Ceramic for Floors</u> Ceramic tiles and tilework as specified and detailed, installed complete; Including for substrate preparation, cement: sand screeds or plaster backing coats; setting, jointing and grouting; tile trim and accessories; sealants; and all other related ancillaries as indicated or required				
9.2.1.1	Supply and install anti skid colored full mass ceramic tiles for classroom (first choice) for all floor toilets, kitchen and laboratory (existing and new) or similar to existing <i>Rate or Lump Sum in Words:</i>	m ²			
9.2.1.2	Skirting same type of floors or similar to existing <i>Rate or Lump Sum in Words:</i>	m			
9.2.2	<u>New Glazed Colored Ceramic for Walls</u>				
9.2.2.1	Supply and install glazed colored ceramic for walls Include Ceramic Corner (first choice as specified or similar to <i>Rate or Lump Sum in Words:</i>	m ²			

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1553

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
9.2.3	<u>New Tiles for stairs</u> Supply and install tiles first choice for the new stair (treads 3cm thick - Risers 2cm thick) and landing - tiling 2cm and for all floors or otherwise specified color type and quality to be submitted for approval, works to include: - Labor, materials and installations - Under tile fill - Mortar - Lining - Step (Tread + riser) and landing and all type of skirting - And needed items to complete the works as per the Engineer instructions				
9.2.3.2	Granite 2cm Thick (Tread and Riser) <i>Rate or Lump Sum in Words:</i>	m			
9.2.3.3	Mosaic Similar to existing 4cm Thick minimum (Tread and Riser) <i>Rate or Lump Sum in Words:</i>	m			
9.2.4	<u>Repair existing broken floor tiles and skirting (all types) and reinstall by new, similar to existing for all rooms and</u> ..				
8.2.4.1	Rehabilitate and repair all damaged and broken tiles, and skirting for any type (marble - ceramic - mosaic - Cement). Remove broken or damaged pieces to be replaced without affecting the adjacent undamaged areas Work to include: - Remove all debris as specified - All materials and labors - Difference tiles (shapes thickness, dimension, pattern) as needed. - Cutting and repair - Grouting - Polish and rubbing - All needed items as per Engineer comments and complete to Engineer approval. <i>Rate or Lump Sum in Words:</i>	LS	1.00		
<i>Carried To Collection</i>					

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1553

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
9.2.5	<u>Rehabilitate Existing Stair Treads and Riser</u> Remove the broken treads and risers, install and supply new ones similar to the existing with the needed side bases, width as per site dimension with skirting and tiles for landing The work to be as per the Engineer instructions				
9.2.5.1	Existing Mosaic Stair the price including Skirting tiles & Landing <i>Rate or Lump Sum in Words:</i>	m			
9.2.6	<u>Threshold Tiles (Doors, Marble Topping)</u> Supply and install 3cm thick threshold as per the Engineer instructions Cost to include: - Fixing materials - All materials - All labors - All Edges must be rounded or chamfered - All needed items as per the Engineer instructions				
9.2.6.1	Natural Stone Threshold or similar to existing <i>Rate or Lump Sum in Words:</i>	m			
9.2.6.2	Marble Coping or similar to existing <i>Rate or Lump Sum in Words:</i>	m			
9.2.6.3	Natural Stone Coping or similar to existing <i>Rate or Lump Sum in Words:</i>	m			

Carried To Collection

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1553

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
9.2.7	<u>Clean and Rub the Existing Floor Tiles and Skirting</u> Rehabilitate any type of flooring tiles and skirting (ceramic - mosaic - etc.) Work to include: - All materials and labors - Grouting - Polish and rubbing - All needed items as per the Engineer instruction as specified				
9.2.7.1	Type 1: Marble or similar to existing <i>Rate or Lump Sum in Words:</i>	m ²			
9.2.7.2	Type 2: Ceramic or similar to existing <i>Rate or Lump Sum in Words:</i>	m ²			
9.2.7.3	Type 3: Mosaic or similar to existing <i>Rate or Lump Sum in Words:</i>	m ²			
9.3	<u>Suspended Ceilings</u> The suspended ceiling, work to include: - All panels - All heavy duty hangers and accessories as specified - Rails (hidden type) - Special metal heavy duty suspension systems - All needed heavy duty accessories and items to complete the works - Works to be indicated on drawings and as per the - Works should be coordinated between the starting and the end of the floor panels and also should be coordinated with the electromechanical units in the ceiling - All works should be as instructed by the Engineer				
9.3.1	<u>Metal Sheet Strips Suspended Ceilings:</u>				
9.3.1.3	Rehabilitate Metal Strips <i>Rate or Lump Sum in Words:</i>	m ²			

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1553

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
9.5	<u>Painting</u>				
9.5.1	<u>Wall and Ceilings Paint Works</u> Wall paint include preparation of the base surfaces to receive the paints and apply the specified layers of putty and paint from the best quality as per specifications and as indicated in drawings The base surfaces should be clean and smooth and free from any pulled out old paints before starting application of the specified primer/undercoat. Apply 2 layers of putty then after smoothening, then 3 layers of the approved paint materials. All works and items should be as per manufacturer recommendation, compatible with each other and as per the Engineer instructions and approval, <i>All paint types must be <u>lead-free</u> and <u>Low VOC</u> (Volatile Organic Compounds)</i>				
9.5.1.2	Super Rubber Paint for old walls and ceilings <i>Rate or Lump Sum in Words:</i>	m ²	1,875.00		
9.5.1.4	Oil Paints for old walls and ceilings <i>Rate or Lump Sum in Words:</i>	m ²	1,500.00		
9.5.2	<u>Outside Walls Paint (Old and New Walls and Ceilings)</u>				
9.5.2.1	Paint for external old and new walls, smooth touch Work to include: - Removal of any paint or obstacle - Rehabilitate the surfaces and make them goods - Polyurethane where needed for cracks - Apply one coat of undercoat - Apply 2 coats of external paint or rolled textured paint - Apply one layer of external transparent paint (acrylic styrene copolymer elastic water proof) - All needed scaffolding and materials for the best execution of the works - All works and items should be as per manufacturer and the Engineer instructions and approval. <i>Rate or Lump Sum in Words:</i>	m ²			

Carried To Collection

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1553

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
10	<u>SPECIALTIES</u>				
10.1	<u>Bathrooms Accessories</u>				
	- Remove and cart away old damaged fixtures				
	- Supply and install all needed accessories and make good their places and their surroundings				
	- Place all frame, cover joints (stainless steel) anti-corrosion				
	- Install items and their contact with the surfaces				
	- All works should be done as per the Engineer instructions				
10.1.2	<u>Soap Dispenser</u>				
10.1.2.1	Supply and install stainless steel 316 no rust, no stain, soap dispenser wall type fixation (anti-rust materials and accessories) with all needed items or similar to existing				
	All works should be done as the Engineer instructions	No			
	<i>Rate or Lump Sum in Words:</i>				
					
10.1.4	<u>Mirror for Lavatories</u>				
	Supply and install 6mm glass mirror for lavatories with colored PVC frames as show on drawings and as stated in the specifications with all needed items and accessories or similar to existing				
	The mirror should be placed on 3mm thick plywood from the back				
	All works should be done as the Engineer instructions				
10.1.4.1	Mirror (Dimension as per site conditions and engineer instruction)	No			
	<i>Rate or Lump Sum in Words:</i>				
					

Carried To Collection

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1553

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
10.3	<u>Resin Work</u>				
10.3.1	<u>Drinking Basin</u>				
	Supply and install drinking basin as shown on drawings of resin layers 12 mm thick fixed on galvanized steel skeleton 4 x 4 cm hollow sections and as shown on drawings				
	Work to include:				
	- Materials				
	- Labors				
	- Galvanized steel skeleton				
	- All needed items and as instructed by the Engineer				
10.3.1.1	Drinking Basin -Length (up to 2.20 m)	Nº			
	<i>Rate or Lump Sum in Words:</i>				
					
10.3.1.5	Drinking Basin -Length (3.81 to 4.10 m)	Nº			
	<i>Rate or Lump Sum in Words:</i>				
					
10.3.1.6	Drinking Basin -Length (4.11 to 6.20 m)	Nº			
	<i>Rate or Lump Sum in Words:</i>				
					
10.3.2	<u>Lavatory Countertop</u>				
10.3.2.1	Supply and install complete counter for lavatories in toilets where shown on drawings to be of 12mm resin layer as per drawings and the work to include:				
	- All fixing elements				
	- All stainless steel hangers				
	- All necessary heavy duty accessories				
	- Counter edge of 30cm length				
	- All needed items and as instructed by the Engineer	m			
	<i>Rate or Lump Sum in Words:</i>				
					

Carried To Collection

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1553

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
	<i>From Collection</i>				
10.3.4	<u>Kitchen Counter</u>				
	Supply and install complete counter resin type with sink (resin) for teachers' kitchen of 18mm thick including coved splash back 20cm height and the work to include:				
	- All fixing elements				
	- All stainless steel hangers				
	- All necessary accessories				
	- All needed items and as instructed by the Engineer				
10.3.4.2	Kitchen Counter - Length (1.11 to 1.75m)	Nº			
	<i>Rate or Lump Sum in Words:</i>				
10.8	<u>Complete Accessible Toilet</u>				
10.8.1	Supply, construct, install, test and commission one complete accessible toilet, including all necessary civil, architectural, plumbing and ventilation works, fully coordinated and ready for use. The item shall include, but not be limited to, hollow concrete block walls, cement plaster and painting, ceramic floor and wall tiles, PU waterproofing, complete water supply piping and connections, complete drainage piping and connections, accessible WC and washbasin/lavatory, all required sanitary fittings and accessories, grab bars and other accessibility provisions, ventilation system, and external-grade plastic laminate door with all required ironmongery and fittings.				
	The Contractor shall verify all dimensions, levels, access requirements and existing site conditions prior to commencement of works and shall ensure that the toilet dimensions and layout comply with applicable accessibility requirements and are suitably adapted to the actual location and site constraints.				
	The Contractor shall prepare and submit complete coordinated shop drawings, including plans, sections, elevations, dimensions, sanitary and plumbing layouts, accessibility provisions, door details and all relevant details, for the Engineer's review and approval prior to execution. The rate shall include all materials, labour, fittings, supports, connections, testing, making good and all other incidental works necessary to provide a complete, functional and fully operational accessible toilet in accordance with the approved shop drawings, Drawings, Specifications, accessibility requirements and applicable standards				
	- Complete Accessible Toilet	item			
	<i>Rate or Lump Sum in Words:</i>				

Carried To Summary

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1553

Part-2 - Mechanical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
1	<u>GENERAL TECHNICAL REQUIREMENTS</u>				
1.1	<u>General Mechanical Requirements</u>				
1.1.2	Prepare the shop drawings for all mechanical works (where needed) and obtain approval from the Engineer before the start of executing any work. <i>Rate or Lump Sum in Words:</i>	Item	1.00		
1.2	<u>Rehabilitation Works General Requirements</u> Provide all necessary rehabilitation works and make all Mechanical systems in good condition complete including maintenance, cleaning, relocation works, replacing damaged items and equipment, removing and carting away resulting materials and equipment, testing and commissioning, and all other related works to ensure all Mechanical systems are properly working and functional.				
1.2.1	Maintenance and rehabilitation of existing plumbing works, including sanitary fixtures, changing Wc Covers, floor drains, roof drains, manholes, pumps, WC tanks, adding where applicable all necessary valves, flush valves, Traps, Elbow ...etc. removing newly installed showers, and all other necessary works. <i>Rate or Lump Sum in Words:</i>	Item	1.00		

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1553

Part-2 - Mechanical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
2	<u>SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION</u>				
2.1	<u>Drainage System</u> Supply, install and test the storm water drainage from (UPVC) pipes inside the building to outside and the pipes to be measured in Linear Meter with all related accessories, cleanout, elbows, vent hangers, and all necessary accessories as per standard installation details				
2.1.1	Ø 50 mm / UPVC <i>Rate or Lump Sum in Words:</i>	m			
2.1.2	Ø 75 mm / UPVC <i>Rate or Lump Sum in Words:</i>	m			
2.1.3	Ø 110 mm / UPVC <i>Rate or Lump Sum in Words:</i>	m			
2.2	<u>Floor Drain</u> Supply and install floor drain P.V.C. with chrome plated brass drain cover and to be the same level as the floor and do all necessary installation and connections. This includes all civil works and connection to the proper floor pipes and as per the Engineer instructions				
2.2.1	FD-01: Ø75 mm bottom outlet <i>Rate or Lump Sum in Words:</i>	Nº			
2.3	<u>Drain Cover</u> Supply and install floor drain cover (P.E) or (similar to existing) 5 mm thick on drainage pipe and to be the same level of the floor tiling. Work to include all civil works and as per the				
2.3.1	Cover for FCO <i>Rate or Lump Sum in Words:</i>	Nº			

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1553

Part-2 - Mechanical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
3	<u>WATER PIPE WORK INSTALLATION</u>				
3.1	<u>Water Tanks</u> Supply & install polyethylene water tank (3 layers) or more with all necessary supply and over flow connections all as per the Engineer instructions				
3.1.2	2000 liters PE water tank <i>Rate or Lump Sum in Words:</i>	No			

Carried To Collection

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1553

Part-2 - Mechanical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
5	<u>SANITARY FIXTURES</u>				
5.1	<u>W.C. for Kids</u> Supply and install K.G. W.C. Flush valve with cover as manufactured by Duravit - Bambi No. 018509 or approved equal, or similar to existing, 35 cm height max. from finished floor with timber cover. Cost to include all related connections angle valves and necessary accessories as per the Engineer instructions. Each W.C. should be equipped with a Flushing Hose (Grohe or Ideal standard or approved equal, or similar to existing)				
5.1.1	EWC-03 (Wall Hang - 52 x 32 cm) <i>Rate or Lump Sum in Words:</i>	Nº			
5.2	<u>W.C. For Non Kids</u> Supply and install W.C. for non kids, Flush valve with cover as manufactured by Ideal Standard Item No. E876801 also the hose, or approved equal, or similar to existing, and to be 40 cm from floor finish with timber cover. The work to include the installation, liking, cleaning with all necessary connection, angle valves and necessary accessories similar to the K.G.W.C. Each W.C. should be equipped with a Flushing Hose (Grohe or Ideal standard or approved equal, or similar to existing)				
5.2.1	EWC-01 (Wall Hang - 52 x 36 cm) or as existing <i>Rate or Lump Sum in Words:</i>	Nº			
5.2.3	AWC-01 (Asian water closet) <i>Rate or Lump Sum in Words:</i>	Nº			

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1553

Part-2 - Mechanical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
5.3	<u>Lavatories for Kids in the K.G.</u> Supply and install semi pedestal wash basin similar to Ideal Standard No. 742001 or approved equal, or similar to existing, 45 x 36 cm, and fixed at 60 cm high from the floor finish. Cost to include all necessary connections, angle valves and accessories as required				
5.3.1	LAV-03 (semi-pedestal wash basin - 45 x 35 cm) <i>Rate or Lump Sum in Words:</i>	Nº			
5.4	<u>Lavatories for Non Kids</u> Supply and install semi pedestal wash basin similar to Ideal Standard No. 742001 or approved equal, or similar to existing, and fixed at 82 cm high from the floor finish. Cost to include all necessary connections, angle valves, traps and necessary accessories as specified.				
5.4.1	LAV-01 (semi-pedestal with mixers 55 x 45 cm) <i>Rate or Lump Sum in Words:</i>	Nº	3.00		
5.6	<u>Self Close Taps on Kids & Students Lavatories</u> Supply and install self close taps to be fixed in the lavatory body as manufactured by Grohe Item No. 36-173, or similar to existing, with all required works and drain accessories including trap, to be connected to the new water supply and drain and as instructed by the Engineer				
5.6.1	Self Close Taps <i>Rate or Lump Sum in Words:</i>	Nº	9.00		
5.7	<u>Wall Type Self Close Taps on Drinking Basins</u> Supply and install self close taps to be fixed in the drinking basin body as manufactured by Grohe Item No. 36-176, or similar to existing, with all required works and drain accessories including trap and to be connected to the new water supply and drain and as instructed by the Engineer				
5.7.1	Wall Type Self Close Taps <i>Rate or Lump Sum in Words:</i>	Nº			
Carried To Summary					

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1553

Part-3 - Electrical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
1	<u>BASIC ELECTRICAL REQUIREMENTS</u>				
	The Contractor should revise all the drawings and compare them with the site conditions and redo all the design works with the necessary calculations for all the electrical installations and works. Moreover, the Contractor should submit shop drawings and as-built drawings for the maintenance use in the future. The contractor should provide all the necessary maintenance works for all Electrical systems related to the KG school to ensure its proper works. At the end of the project, the contractor should submit complete As-Built Drawings for all executed works with exact dimensions & sizes for easy maintenance work in the future.				
1.1	<u>Fixing and Repairing</u>				
	Check & repair all the existing cables, wires, socket outlets, lighting fixtures, lighting switches, electric fans, and protect all exposed wiring as per the site conditions, and to the satisfaction of the Engineer. All as per the drawings, specifications and Engineer instructions				
1.1.1	Lighting fixtures <i>Rate or Lump Sum in Words:</i> 	LS	1.00		
1.1.2	Wires and cables <i>Rate or Lump Sum in Words:</i> 	LS	1.00		
1.1.3	Sockets and switches <i>Rate or Lump Sum in Words:</i> 	LS	1.00		
1.1.4	Circuit breakers <i>Rate or Lump Sum in Words:</i> 	LS	1.00		
1.1.5	Disconnecting switches <i>Rate or Lump Sum in Words:</i> 	LS	1.00		

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1553

Part-3 - Electrical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
1.1.6	Electrical panel boards with grounding <i>Rate or Lump Sum in Words:</i>	LS	1.00		
1.1.9	All needed electrical works ... etc. <i>Rate or Lump Sum in Words:</i>	LS	1.00		

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1553

Part-3 - Electrical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
2	<u>PANELBOARDS</u>				
2.1	Supply, install or rehabilitate the existing panel board if possible including enclosures, busbars, protective devices, MCB & MCCB breakers according to IEC-60947-2 as per the site conditions and Engineer instructions.				
2.1.1	MDB	No			
	<i>Rate or Lump Sum in Words:</i>				
					
					

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1553

Part-3 - Electrical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
3	<u>GENERAL LIGHTING INSTALLATIONS</u>				
3.1	<u>Lighting Fixtures</u> Supply, install and test the lighting fixtures complete with all the necessary wires conduits, boxes and accessories required to provide power to each lighting fitting from LP including the earth wire as per the drawings, specifications and Engineer instructions. The Contractor should submit samples of each lighting fixture for approval.				
3.1.1	TYPE C1: Twin T8 LED Tube, surface-mount luminaire for interior, 40W, 4000K, 4700Lm. Polycarbonate, light grey, with injected polyurethane double gasket and clear UV stabilized polycarbonate cover, $\cos \phi \geq 0.9$, or similar to existing.	Nº			
	<i>Rate or Lump Sum in Words:</i>				
3.1.4	TYPE A2 / A3: 600x600 mm LED Panel 3600lm, 33W, 4000K, 80CRI surface-mount/recessed, die-cast aluminum, IP20, or similar to existing.	Nº			
	<i>Rate or Lump Sum in Words:</i>				
3.1.6	TYPE N4 / N3: LED - 900lm - 12.5W - 3000K - 80CRI - WW Surface mounted / Recessed Downlight Round - 120 deg, or similar to existing.	Nº	10.00		
	<i>Rate or Lump Sum in Words:</i>				

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1553

Part-3 - Electrical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
10	<u>LIFTS REHABILITATION</u>				
10.1	Rehabilitation of the existing lift as described in specification, including all coordination, design, execution drawing and details, security of the personnel, scaffolding, labor and equipment necessary for the perfect operation of the lift and to the satisfaction of the engineer				
	Cost to include 5 years maintenance contract with all necessary spare parts and all as needed.				
	For 2 hours (fire rated) having the following characteristics:				
	Capacity: as per existing				
	Speed: as per existing				
	Entrance size/ type: as per site dimensions				
	Opening as per existing	No			
	<u>Rate or Lump Sum in Words:</u>				
					
					

Carried To Summary

Bill of Quantities - Lot-3 - School CERD: 1637
Sandiyanit Zeidan Public School

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1637

Summary

<u>Description</u>	<u>Amount (US \$)</u>
Part-1 - Civil, Structural and Architectural Works	
Part-2 - Mechanical Engineering Services	
Part-3 - Electrical Engineering Services	
	
* Total Amount of Bill of Quantities	
* Discount by Tenderer (_____ %)	
	
	
* Total Amount of Tender (VAT Not Applicable)	
	
	
* Total Amount of Tender in Words:	
.....	
.....	
.....	

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1637

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
1	<u>SITE PREPARATION AND DEMOLITION</u>				
1.1	<u>Demolishing and Removal of Debris</u>				
1.1.1	The works include all types of demolition and the removal of debris and damaged elements such but not limited to, the following: - Existing plastering and concrete items such as foundations, columns, slabs, etc. - Damaged Tiling (floors and walls) - Toilet fixtures and pipes installation of all sizes - Counter tops, bases and sinks - Water tanks of different types - Hollow concrete block walls or concrete walls of all sizes - Demolition of the existing ramps / Stairs and the execution of the given plans and specifications - Including the necessary equipment for the removal of debris and all resulting materials - etc. <i>Rate or Lump Sum in Words:</i> 	LS	1.00		

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1637

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
2	<u>SITE PREPARATION AND DEMOLITION</u>				
2.3	<u>Existing Walkways</u>				
2.3.1	Repair existing walkways at project site boundary; precast concrete paver tiles, bases courses, etc., as necessary, where damaged or distributed by new construction without affecting the adjacent undamaged areas; make good and joint at junction with new precast concrete paving and/or curbing as required and to Engineer's approval.	LS			
<i>Rate or Lump Sum in Words:</i>					
2.5	<u>Ramp for External Existing Sidewalk or for accessibility purpose</u>				
2.5.1	Supply and install external pedestrian ramp as per approved shop drawing submitted by contractor Work to include: - Remove parts of sidewalk including curbstone and existing tiles - Remove the debris to outside the site - Submit detailed shop drawing compatible with ADA requirements - Supply and install concrete curbstone for the ramp - Supply and install floor tiles identical to the existing with mortar and all layers - All needed items as per the Engineer instructions	LS			
<i>Rate or Lump Sum in Words:</i>					
2.9	<u>Rehabilitation of Playground Slabs (External Playground)</u>				
2.9.1	Clean the rehabilitated places by removing all debris and make good all the edges and remove all broken slabs & failed slabs and remove to outside the site all the debris & refused items, cast proper concrete in places where the removal of all debris (No patching is allowed for the existing concrete surfaces) Work to include: - Removal and cleaning the location - Materials, fill - Labors - Make good the surfaces - Lining and marking all playgrounds as per site instructions - All needed refurbishing works as per the Engineer instructions	m ²			
<i>Rate or Lump Sum in Words:</i>					
<i>Carried To Collection</i>					

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1637

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
3	<u>CONCRETE</u>				
3.2	Reinforced Concrete Footings, Tie Beams, Columns and Walls Drop - Parapete - Slab on Grade				
3.1.2	Supply, cast and vibrate concrete for footing, tie beams, walls, parapets. Up stand, drop parapets with a crushing strength 350kg/cm2, cost to includes: - Formwork - Steel reinforcement - All needed work as per Specifications and the Engineer instructions <i>Rate or Lump Sum in Words:</i>	m3			

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Lebanon Emergency Assistance Project (LEAP)
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Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
4	<u>MASONRY</u>				
4.1	<u>Hollow or Solid Concrete Blocks and Claustra</u> Supply and install concrete blocks as per drawings Work to include: - All places as per the drawings, and the Engineer instructions. - Materials - Cement mortar and the use of extruded nets and reinforcement by means of metal gates and the placement of angles of galvanized steel iron of concrete columns thickness of 4 mm every 60 cm - Labors and all items needed and instructions by the Engineer				
4.1.2	10 cm hollow concrete blocks <i>Rate or Lump Sum in Words:</i>	m ²			
4.1.4	15 cm hollow concrete blocks <i>Rate or Lump Sum in Words:</i>	m ²			

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Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
	<i>From Collection</i>				
4.2	<u>Rehabilitate and Clean masonry walls showing deep crack</u> The repair method requires the replacement of some stone masonry that has been damaged by the crack. It will include the use of horizontal reinforcement. Remove cracked stones in a “toothed” pattern to the extent that a sound repair is possible. Clean the crack if it continues to extend into the mass masonry and grout with non shrink mortar. Key new stone in stone masonry perpendicular to the wall surface in addition to the “toothed” and stepped pattern parallel to the wall surface. With larger more extensive cracks remove additional stones in a stepped pattern on both sides and the top of crack and restore by installing new stones. With smaller repairs lesser amounts of stones will have to be removed. Place horizontal reinforcement every 5th course. Mechanical ties to secure geogrid may be required. The horizontal reinforcement shall bridge over the crack and extend the length of new stone masonry. Replicate the coursing pattern of the existing exposed surface. Place new stones that are not exposed in an alternating stretcher-header bonding pattern to wall surface or top of wall. Construct the new stone masonry in complete horizontal courses where possible. Do not construct more than 5 courses before allowing masonry to dry. Lay subsequent stone courses on fresh wet mortar. Apply mortar at head joints as well as bed joints and finish one-half the width of the mortar joint below the surface of the stones.				
4.2.1	<u>Rehabilitate Natural Stone Facades</u> Rehabilitate works on natural stone facades work should be by replacing the damaged stone and not filling with mortar. Work to include: - Determine location of damaged stone walls and location of dampness. Broken or damaged pieces to be replaced, then cleaning & leveling; without affecting the adjacent undamaged - Treat the dampness and the causes - Repair the stone by renewing the damaged and replace it with new ones with same stone and apply one layer of water proofing transparent paint - Clear the place and infill in between the coarse (Lining) - All works as instructed by the Engineer <i>Rate or Lump Sum in Words:</i> Carried To Collection	m ²			

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Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
	<i>From Collection</i>				
5	<u>METAL WORKS</u>				
5.1	Provide New Steel Work (Door & Windows)				
5.1.1	Provide new steel doors with related accessories as per <i>Rate or Lump Sum in Words:</i>	Nº			
5.1.3	Provide new double glazed aluminum windows with new burglar proof protection <i>Rate or Lump Sum in Words:</i>	Nº			
5.2	<u>Rehabilitate and Maintain the Existing Steel Work (Burglar Proof Protection + Opening)</u> Rehabilitate the existing steel windows or doors as per specifications and drawings and the Engineer instruction Work to include: - Remove all damaged members and replace by new ones - Rub completely to secure all parts and use putty to make faces smooth - Apply two layers of anti rust paint - Apply putty - Apply three layers of epoxy external paint - All needed items as per the Engineer instructions				
5.2.1	Rehabilitate existing steel doors <i>Rate or Lump Sum in Words:</i>	Nº			
5.2.2	Rehabilitate existing steel gates <i>Rate or Lump Sum in Words:</i>	Nº	2.00		
5.2.4	Rehabilitate existing burglar proof steel protection <i>Rate or Lump Sum in Words:</i>	Nº			
5.2.5	Rehabilitate and paint existing steel louvers with related <i>Rate or Lump Sum in Words:</i>	Nº			
5.2.6	Rehabilitate and paint existing steel window / Curtain Wall <i>Rate or Lump Sum in Words:</i>	Nº			
	<i>Carried To Collection</i>				

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Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
5.3	<u>Rehabilitate Existing Steel Shed Works</u> Rehabilitate the existing steel elements of the existing shed and the work to include: - Remove existing cover (Asbestos, TOT, etc.) and to be dismantled and carted away to outside the site to dumps approved by municipality - Brick tiles to be disassembled and removed and stored in appropriate location as per engineer's instruction and to checked for reused if needed - Clean, rub and repaint all steel structure and do the necessary reinforcement - Damaged steel structure to be replaced with new steel structure similar to existing. - Support and add new beams similar to existing. - Remove existing paint & clean deeply as per SSPC code and ISO 8501 - Apply base and epoxy as specified - Supply the roof covers as per drawings - Install the galvanized steel gutter (No Welded) and all Steel pipe works - Corrugated Metal sheet flashing between walls and shed roof with mastic - All needed items as per the Engineer instructions				
5.3.1	Rehabilitate and strength steel sheds and replace existing sheet by insulated sandwich panel <i>Rate or Lump Sum in Words:</i>	m ²			
5.3.2	Rehabilitate and strength steel sheds and replace existing sheet by polycarbonate triple layer <i>Rate or Lump Sum in Words:</i>	m ²			
5.3.3	Rehabilitate and strength steel sheds and replace existing sheet by insulated sandwich panel with polycarbonate triple layer <i>Rate or Lump Sum in Words:</i>	m ²			
5.3.4	Rehabilitate and strength steel sheds and replace existing sheet by PVC sheet or as exisitng <i>Rate or Lump Sum in Words:</i>	m ²			
<i>Carried To Collection</i>					

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Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
5.3.5	Rehabilitate and strength steel sheds and replace existing sheet by brick tiles <i>Rate or Lump Sum in Words:</i>	m ²			
5.3.6	Rehabilitate and strength existing roof bricks and change broken bricks by new ones <i>Rate or Lump Sum in Words:</i>	m ²			
5.3.7	Rehabilitate connection between wall and corrugated roof, a new gutter to be Provided <i>Rate or Lump Sum in Words:</i>	m			
5.5	<u>Rehabilitate and Maintain Steel Handrail</u> - Rehabilitate the existing metal handrail and remove the damaged members and replace by new - Reinforce the existing handrail with similar members in addition to the rail and all necessary accessories - Remove existing paint & clean deeply as per SSPC code and ISO 8501 - Apply one layer of epoxy base paint - Apply putty - Apply epoxy paint as per specification All needed items as per the Engineer instructions				
5.5.1	Floor Mounted <i>Rate or Lump Sum in Words:</i>	m			
5.5.2	Wall Mounted <i>Rate or Lump Sum in Words:</i>	m			

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Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
6	<u>WOOD AND PLASTICS</u>				
6.1	<u>Joinery Works</u>				
6.1.1	<u>Rehabilitate Existing Kitchen Cupboards</u> Rehabilitate existing cupboards, cabinets, drawers, counters, etc., for the existing kitchen. Works to include replacing damaged elements, accessories, material, labor, equipment, maintaining support, change of the top of counter by new resin counter as specified, etc. As per engineer's approval.				
	- Repair wood elements in accordance with AWI Quality Standards requirements. - Repair framing and sash members with mortise and Tenon joints. Ensure joints and connections are flush, hairline, and weather-tight. - Scarf joints permitted when wood matches in color and grain texture. Form sills and stools in one piece. - Fabricate components with minimum clearances and shim spacing around perimeter of assembly, yet allowing installation and dynamic movement of perimeter seal.				
6.1.1.1	Kitchen Cupboards <i>Rate or Lump Sum in Words:</i>	m			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
7	<u>THERMAL AND MOISTURE PROTECTION</u>				
7.0	<u>Preliminaries</u>				
7.0.2	Dismantle and remove all existing materials on roof: Tiles, Membranes, existing water tanks, Mechanical Pumps and Systems, Electrical Systems, skirting, etc.; and all equipment as per engineer instructions The unwanted/ unused materials should be cart away from the site The remaining items should be reinstalled in a proper way as per engineering instructions <i>Rate or Lump Sum in Words:</i>	LS	1.00		
7.1	<u>Roof Waterproofing</u>				
7.1.1	Works should be applied and done by experts with previous experience in similar works. Works to include: - DEEP cleaning of all surfaces and carting away of dust & - Concrete pad for water tanks as indicated - Sand cement screed layer to Provide proper slopes minimum 0.75% - Expansion joint sealant to be done respecting back rod, unbonding tape, adequate thickness of sealant, type & finish of sealant (fire rated) & design drawings especially on roof & planters. - Provide tackle coat (Proper) - Provide 4mm thick, SBS layer from an approved manufacturer - Provide protection for all pipe works and drains - Provide heat insulation layers of 35 KG/m ³ where required - Provide Geotextile layers - Provide all aluminum flashing with mastic - Provide finishing material as required - All as specified and approved shop drawings <i>Rate or Lump Sum in Words:</i>	m ²			

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Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
8	<u>DOOR AND WINDOWS</u>				
8.1	<u>Wooden Doors and Windows</u>				
	Supply and install all timber work with all related items The joinery works should be of the first class type and as per specifications and drawings Work to include:				
	- Material and labors				
	- All accessories to be heavy duty (Hinged, Lock, Glass vision, as required, etc.)				
	- The frame for any width (Steel, Wood, etc.)				
	- Paint as follows:				
	- Anti rust layers				
	- Putty + one layer of undercoat				
	- Three layers of epoxy paint				
	- Apply and fix 6mm wired clear glass				
	- View Permitting glass opening where needed				
	- remove the existing timber panels				
	- repair the edges				
	- The Contractor should submit shop drawings				
	- All needed items as the Engineer instructions				
8.1.1	<u>Timber Doors</u>				
	Supply and install flush timber door as per drawings with laminated plastic facing and the door should have 10cm width frame between the plywood and fill with timber beads by tongue and groove each 5cm, and the door edges should behead wood and fixed by tongue and groove frames should be as specified, with fixed glass panel vision window, and similar to existing, and to the Engineer's instructions				
	- Works included, all accessories and fittings, pre-painting and finishing paint sides of doors and box frames.				
	- All works should be done as per the Engineer instructions				
8.1.1.1	Provide new double leaf wooden door	No			
	<u>Rate or Lump Sum in Words:</u>				
					
8.1.1.2	Provide new single leaf wooden door with view frame	No			
	<u>Rate or Lump Sum in Words:</u>				
					

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Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
	<i>From Collection</i>				
8.1.3	<u>Rehabilitate the Existing Timber Doors</u> As stated in the Preambles of Item 8.1 In addition, rehabilitate the existing timber doors: The minimum amount of existing timber should be removed to allow an effective repair to be formed. Cut out deteriorated area of timber in sloping splice to give optimum area of surface to be glued & fixed. Well-seasoned timber to be used in forming a repair with the line and density of grain (number of growth rings) of new timber matching the existing as closely as possible. For all joinery work, timber with shakes, fissures, warping, heartwood, sapwood or numerous/large knots should be avoided for use in repair. Always work new material to the line of the existing and avoid unnecessary trimming of original timber. Repairs should follow any existing deformations in the line of the wood element (e.g. door or window). Avoid mixing timber species between new and existing in a repair as joint between the two is likely to fail from different rates of expansion and contraction during dry & damp conditions. Where possible, spliced repairs to be designed to ensure moisture is towards the outer face of timber and that moisture does not lay on the repair joint. The length of the splice is governed by section of timber and the nature of component being repaired and it should be designed to ensure an effective bond between new and existing sections of timber. Where wood element are to be dismantled as part of the repair process, always mark and record the constituent parts before dismantling. similarly, number of glass panes/quarries before removal. If applicable carefully soften putty or remove wood trim and then remove glass. Use glue, to connect a new outer section of bottom rail to the existing sound timber. Drill and insert new wooden pins or fix using brass screws from inside. Casements or sashes are often in sound condition but the joints have become loose due to the break down of glue and loose wedges. The wedges will often be easily removable and will probably be unsuitable for re-use. It may be for the joints to be pulled together successfully. Attach door frame and shims to perimeter opening to accommodate construction tolerances & all irregularities. Align door plumb and level, free of warp or twist. Maintain dimensional tolerances and alignment with adjacent work. Install operating hardware.				
8.1.3.1.1	Rehabilitate and paint existing single leaf timber doors with related accessories <i>Rate or Lump Sum in Words:</i> <i>Carried To Collection</i>	Nº	2.00		

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Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
8.1.3.1.2	Rehabilitate existing double leaf door <i>Rate or Lump Sum in Words:</i>	Nº			
8.1.3.1.4	Rehabilitate wooden windows <i>Rate or Lump Sum in Words:</i>	Nº			
8.2	<u>Aluminum Doors and Windows</u> Fabricate, supply and install aluminum works as manufactured by SIDEM 2000 first choice with all necessary accessories as per the drawings and the Engineer instructions, cost to include all doors and windows: - Reveals hard stone 3cm thick, all around for external opening - Apply EPDM around door and windows where necessary - Single glass 6 mm - Double glass 6-12-6 mm (Outer Glass should be Tempered) - Hinges and locks - Joint Filler - Mosquito Screen - Mesh - All items needed as per the Engineer instructions - All as specified and base on an approved shop drawings after exact dimensions				
8.2.1	<u>New Aluminum Panels (Double Glass)</u> Supply and install the fabricated aluminum panels with double glass (6 - 12 - 6 mm) (Outer Glass should be Tempered or similar to existing)				
8.2.1.1	Provide new aluminum double glazed window & door panel <i>Rate or Lump Sum in Words:</i>	Nº			
8.2.2	<u>New Aluminum Internal Door</u> Supply and install aluminum door with frame and related strengthening stud, Works to include: Materials, and accessories - Labors - All needed items as per the engineer instructions. - Repair all around the opening				
8.2.2.1	Provide new aluminum partition door as indicated. <i>Rate or Lump Sum in Words:</i>	Nº			
<i>Carried To Collection</i>					

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Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
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From Collection

- 8.2.3 Rehabilitation Existing Glazed Aluminum Panels (s)**
Replacing Broken Glass. Fixing Hardware Issues: Check the functionality of latches, hinges, and other hardware. If any parts are broken, replace them with new ones to ensure the window operates smoothly. After repairs, apply a high-quality sealant around the edges to prevent moisture intrusion. If the paint is peeling or faded, consider repainting the frame with a metal paint formulated for aluminum to enhance durability and appearance.

8.2.3.1	Rehabilitate existing windows, doors and gates	Nº	3.00		
	<i>Rate or Lump Sum in Words:</i>				
					
					

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Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
9	<u>FINISHES</u>				
9.1	<u>Cement Plaster</u>				
	Supply and install sand cement plaster on concrete and block wall surfaces as specified The plaster layer should be own a base rough layer The plaster works should be on level points and each point should be at 1.5 m from the second only Work to include: - Materials and accessories (galvanized, wire mesh, cover beds, etc.) - Labors - All addition watering - All tools - Plaster thickness more than 2 cm - All needed items as per drawings and the Engineer instructions				
9.1.1	<u>Internal and External Plaster Works</u>				
9.1.1.1	Supply and apply one layer of sand cement plaster over a rough textured layer of plaster Price included all accessories, material, scaffolding and labor, etc. <i>Rate or Lump Sum in Words:</i>	m ²			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
From Collection					
9.1.2	<u>Repair of Existing Plaster (Internal - External) (Cracks,</u>				
9.1.2.1	Rehabilitate and repair cracked and damaged plaster indoor and outdoor Work to include: - Determine the location and remove all loose items around the area - Remove the cracked plaster layer - Remove the pulled out layers - Clean the places with suitable materials - Fill all cracks after widening by (No Suggestions) or approved equal. - Remove loose and other deteriorated materials prior to the new repair. Take special care not to damage the adjacent original materials. Prepare mortar joints for installation of lateral reinforcement where it is required. Use thin steel bars to clean joints to maximum depth possible. Remove loose mortar. Mix mortar with minimal amount of water (potable) prior to use. All separation cracks between perpendicular walls shall be filled grout to reduce additional movement from wind loads and thermal expansion-contraction. - Clear debris from crack by probing, brushing, and blowing. - Force non-shrink mortar mixture into crack as deep as possible with hands, wood and metal probes. Use as dry a mix as possible. Use stone bats to fill larger crack voids. Ensure mortar is forced into smaller/deeper cracks. Mortar grout will be fluid in order to flow into crack. Either grout bags or gravity flow shall be used depending on the conditions. Fil Protect repairs from rapid drying by misting, shading, protecting from dry wind cracks in a series of applications rather than one large application. Final application shall not be flush with the surface, but shall be one half the width of the crack below the surface. Remove all tool marks with brush. - Apply the finish rough plaster layer - Install galvanized steel mesh 20 cm width at least - Apply the second smooth plaster layer	LS	1.00		
Rate or Lump Sum in Words:					

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Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
9.2	<u>Tiling Works</u> Supply and install all tiling items for floors, with the skirting Work to include all materials and labors and the Contractor should use all necessary rods and levels as per the Engineer instructions Price to include: - Sand below tiles - Materials, tiles, mortars - Labors - Rubbing - Filling between tiles - Filling the skirting - Remove unsuitable items - Cleaning the places - All needed items as per the Engineer instructions				
9.2.1	<u>New Full Mass Colored Ceramic for Floors</u> Ceramic tiles and tilework as specified and detailed, installed complete; Including for substrate preparation, cement: sand screeds or plaster backing coats; setting, jointing and grouting; tile trim and accessories; sealants; and all other related ancillaries as indicated or required				
9.2.1.1	Supply and install anti skid colored full mass ceramic tiles for classroom (first choice) for all floor toilets, kitchen and laboratory (existing and new) or similar to existing <i>Rate or Lump Sum in Words:</i>	m ²			
9.2.1.2	Skirting same type of floors or similar to existing <i>Rate or Lump Sum in Words:</i>	m			
9.2.2	<u>New Glazed Colored Ceramic for Walls</u>				
9.2.2.1	Supply and install glazed colored ceramic for walls Include Ceramic Corner (first choice as specified or similar to <i>Rate or Lump Sum in Words:</i>	m ²			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
9.2.3	<u>New Tiles for stairs</u> Supply and install tiles first choice for the new stair (treads 3cm thick - Risers 2cm thick) and landing - tiling 2cm and for all floors or otherwise specified color type and quality to be submitted for approval, works to include: - Labor, materials and installations - Under tile fill - Mortar - Lining - Step (Tread + riser) and landing and all type of skirting - And needed items to complete the works as per the Engineer instructions				
9.2.3.2	Granite 2cm Thick (Tread and Riser) <i>Rate or Lump Sum in Words:</i>	m			
9.2.3.3	Mosaic Similar to existing 4cm Thick minimum (Tread and Riser) <i>Rate or Lump Sum in Words:</i>	m			
9.2.4	<u>Repair existing broken floor tiles and skirting (all types) and reinstall by new, similar to existing for all rooms and</u> ..				
8.2.4.1	Rehabilitate and repair all damaged and broken tiles, and skirting for any type (marble - ceramic - mosaic - Cement). Remove broken or damaged pieces to be replaced without affecting the adjacent undamaged areas Work to include: - Remove all debris as specified - All materials and labors - Difference tiles (shapes thickness, dimension, pattern) as needed. - Cutting and repair - Grouting - Polish and rubbing - All needed items as per Engineer comments and complete to Engineer approval. <i>Rate or Lump Sum in Words:</i>	LS	1.00		
<i>Carried To Collection</i>					

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Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
9.2.5	<u>Rehabilitate Existing Stair Treads and Riser</u> Remove the broken treads and risers, install and supply new ones similar to the existing with the needed side bases, width as per site dimension with skirting and tiles for landing The work to be as per the Engineer instructions				
9.2.5.1	Existing Mosaic Stair the price including Skirting tiles & Landing <i>Rate or Lump Sum in Words:</i>	m			
9.2.6	<u>Threshold Tiles (Doors, Marble Topping)</u> Supply and install 3cm thick threshold as per the Engineer instructions Cost to include: - Fixing materials - All materials - All labors - All Edges must be rounded or chamfered - All needed items as per the Engineer instructions				
9.2.6.1	Natural Stone Threshold or similar to existing <i>Rate or Lump Sum in Words:</i>	m			
9.2.6.2	Marble Coping or similar to existing <i>Rate or Lump Sum in Words:</i>	m			
9.2.6.3	Natural Stone Coping or similar to existing <i>Rate or Lump Sum in Words:</i>	m			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
9.2.7	<u>Clean and Rub the Existing Floor Tiles and Skirting</u> Rehabilitate any type of flooring tiles and skirting (ceramic - mosaic - etc.) Work to include: - All materials and labors - Grouting - Polish and rubbing - All needed items as per the Engineer instruction as specified				
9.2.7.1	Type 1: Marble or similar to existing <i>Rate or Lump Sum in Words:</i>	m ²			
9.2.7.2	Type 2: Ceramic or similar to existing <i>Rate or Lump Sum in Words:</i>	m ²			
9.2.7.3	Type 3: Mosaic or similar to existing <i>Rate or Lump Sum in Words:</i>	m ²			
9.3	<u>Suspended Ceilings</u> The suspended ceiling, work to include: - All panels - All heavy duty hangers and accessories as specified - Rails (hidden type) - Special metal heavy duty suspension systems - All needed heavy duty accessories and items to complete the works - Works to be indicated on drawings and as per the - Works should be coordinated between the starting and the end of the floor panels and also should be coordinated with the electromechanical units in the ceiling - All works should be as instructed by the Engineer				
9.3.1	<u>Metal Sheet Strips Suspended Ceilings:</u>				
9.3.1.3	Rehabilitate Metal Strips <i>Rate or Lump Sum in Words:</i>	m ²			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
9.5	<u>Painting</u>				
9.5.1	<u>Wall and Ceilings Paint Works</u> Wall paint include preparation of the base surfaces to receive the paints and apply the specified layers of putty and paint from the best quality as per specifications and as indicated in drawings The base surfaces should be clean and smooth and free from any pulled out old paints before starting application of the specified primer/undercoat. Apply 2 layers of putty then after smoothening, then 3 layers of the approved paint materials. All works and items should be as per manufacturer recommendation, compatible with each other and as per the Engineer instructions and approval, <i>All paint types must be <u>lead-free</u> and <u>Low VOC</u> (Volatile Organic Compounds)</i>				
9.5.1.2	Super Rubber Paint for old walls and ceilings <i>Rate or Lump Sum in Words:</i>	m ²	1,075.00		
9.5.1.4	Oil Paints for old walls and ceilings <i>Rate or Lump Sum in Words:</i>	m ²	10.00		
9.5.2	<u>Outside Walls Paint (Old and New Walls and Ceilings)</u>				
9.5.2.1	Paint for external old and new walls, smooth touch Work to include: - Removal of any paint or obstacle - Rehabilitate the surfaces and make them goods - Polyurethane where needed for cracks - Apply one coat of undercoat - Apply 2 coats of external paint or rolled textured paint - Apply one layer of external transparent paint (acrylic styrene copolymer elastic water proof) - All needed scaffolding and materials for the best execution of the works - All works and items should be as per manufacturer and the Engineer instructions and approval. <i>Rate or Lump Sum in Words:</i>	m ²			

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1637

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
10	<u>SPECIALTIES</u>				
10.1	<u>Bathrooms Accessories</u>				
	- Remove and cart away old damaged fixtures				
	- Supply and install all needed accessories and make good their places and their surroundings				
	- Place all frame, cover joints (stainless steel) anti-corrosion				
	- Install items and their contact with the surfaces				
	- All works should be done as per the Engineer instructions				
10.1.2	<u>Soap Dispenser</u>				
10.1.2.1	Supply and install stainless steel 316 no rust, no stain, soap dispenser wall type fixation (anti-rust materials and accessories) with all needed items or similar to existing				
	All works should be done as the Engineer instructions	No			
	<i>Rate or Lump Sum in Words:</i>				
					
10.1.4	<u>Mirror for Lavatories</u>				
	Supply and install 6mm glass mirror for lavatories with colored PVC frames as show on drawings and as stated in the specifications with all needed items and accessories or similar to existing				
	The mirror should be placed on 3mm thick plywood from the back				
	All works should be done as the Engineer instructions				
10.1.4.1	Mirror (Dimension as per site conditions and engineer instruction)	No			
	<i>Rate or Lump Sum in Words:</i>				
					

Carried To Collection

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1637

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
10.3	<u>Resin Work</u>				
10.3.1	<u>Drinking Basin</u>				
	Supply and install drinking basin as shown on drawings of resin layers 12 mm thick fixed on galvanized steel skeleton 4 x 4 cm hollow sections and as shown on drawings				
	Work to include:				
	- Materials				
	- Labors				
	- Galvanized steel skeleton				
	- All needed items and as instructed by the Engineer				
10.3.1.1	Drinking Basin -Length (up to 2.20 m)	Nº			
	<i>Rate or Lump Sum in Words:</i>				
					
10.3.1.5	Drinking Basin -Length (3.81 to 4.10 m)	Nº			
	<i>Rate or Lump Sum in Words:</i>				
					
10.3.1.6	Drinking Basin -Length (4.11 to 6.20 m)	Nº			
	<i>Rate or Lump Sum in Words:</i>				
					
10.3.2	<u>Lavatory Countertop</u>				
10.3.2.1	Supply and install complete counter for lavatories in toilets where shown on drawings to be of 12mm resin layer as per drawings and the work to include:				
	- All fixing elements				
	- All stainless steel hangers				
	- All necessary heavy duty accessories				
	- Counter edge of 30cm length				
	- All needed items and as instructed by the Engineer	m			
	<i>Rate or Lump Sum in Words:</i>				
					

Carried To Collection

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1637

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
	<i>From Collection</i>				
10.3.4	<u>Kitchen Counter</u>				
	Supply and install complete counter resin type with sink (resin) for teachers' kitchen of 18mm thick including coved splash back 20cm height and the work to include:				
	- All fixing elements				
	- All stainless steel hangers				
	- All necessary accessories				
	- All needed items and as instructed by the Engineer				
10.3.4.2	Kitchen Counter - Length (1.11 to 1.75m)	Nº			
	<i>Rate or Lump Sum in Words:</i>				
10.8	<u>Complete Accessible Toilet</u>				
10.8.1	Supply, construct, install, test and commission one complete accessible toilet, including all necessary civil, architectural, plumbing and ventilation works, fully coordinated and ready for use. The item shall include, but not be limited to, hollow concrete block walls, cement plaster and painting, ceramic floor and wall tiles, PU waterproofing, complete water supply piping and connections, complete drainage piping and connections, accessible WC and washbasin/lavatory, all required sanitary fittings and accessories, grab bars and other accessibility provisions, ventilation system, and external-grade plastic laminate door with all required ironmongery and fittings.				
	The Contractor shall verify all dimensions, levels, access requirements and existing site conditions prior to commencement of works and shall ensure that the toilet dimensions and layout comply with applicable accessibility requirements and are suitably adapted to the actual location and site constraints.				
	The Contractor shall prepare and submit complete coordinated shop drawings, including plans, sections, elevations, dimensions, sanitary and plumbing layouts, accessibility provisions, door details and all relevant details, for the Engineer's review and approval prior to execution. The rate shall include all materials, labour, fittings, supports, connections, testing, making good and all other incidental works necessary to provide a complete, functional and fully operational accessible toilet in accordance with the approved shop drawings, Drawings, Specifications, accessibility requirements and applicable standards				
	- Complete Accessible Toilet	item			
	<i>Rate or Lump Sum in Words:</i>				

Carried To Summary

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1637

Part-2 - Mechanical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
1	<u>GENERAL TECHNICAL REQUIREMENTS</u>				
1.1	<u>General Mechanical Requirements</u>				
1.1.2	Prepare the shop drawings for all mechanical works (where needed) and obtain approval from the Engineer before the start of executing any work. <i>Rate or Lump Sum in Words:</i>	Item	1.00		
1.2	<u>Rehabilitation Works General Requirements</u> Provide all necessary rehabilitation works and make all Mechanical systems in good condition complete including maintenance, cleaning, relocation works, replacing damaged items and equipment, removing and carting away resulting materials and equipment, testing and commissioning, and all other related works to ensure all Mechanical systems are properly working and functional.				
1.2.1	Maintenance and rehabilitation of existing plumbing works, including sanitary fixtures, changing Wc Covers, floor drains, roof drains, manholes, pumps, WC tanks, adding where applicable all necessary valves, flush valves, Traps, Elbow ...etc. removing newly installed showers, and all other necessary works. <i>Rate or Lump Sum in Words:</i>	Item	1.00		

Carried To Collection

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1637

Part-2 - Mechanical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
2	<u>SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION</u>				
2.1	<u>Drainage System</u> Supply, install and test the storm water drainage from (UPVC) pipes inside the building to outside and the pipes to be measured in Linear Meter with all related accessories, cleanout, elbows, vent hangers, and all necessary accessories as per standard installation details				
2.1.1	Ø 50 mm / UPVC <i>Rate or Lump Sum in Words:</i>	m			
2.1.2	Ø 75 mm / UPVC <i>Rate or Lump Sum in Words:</i>	m			
2.1.3	Ø 110 mm / UPVC <i>Rate or Lump Sum in Words:</i>	m			
2.2	<u>Floor Drain</u> Supply and install floor drain P.V.C. with chrome plated brass drain cover and to be the same level as the floor and do all necessary installation and connections. This includes all civil works and connection to the proper floor pipes and as per the Engineer instructions				
2.2.1	FD-01: Ø75 mm bottom outlet <i>Rate or Lump Sum in Words:</i>	Nº			
2.3	<u>Drain Cover</u> Supply and install floor drain cover (P.E) or (similar to existing) 5 mm thick on drainage pipe and to be the same level of the floor tiling. Work to include all civil works and as per the				
2.3.1	Cover for FCO <i>Rate or Lump Sum in Words:</i>	Nº			

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1637

Part-2 - Mechanical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
3	<u>WATER PIPE WORK INSTALLATION</u>				
3.1	<u>Water Tanks</u> Supply & install polyethylene water tank (3 layers) or more with all necessary supply and over flow connections all as per the Engineer instructions				
3.1.2	2000 liters PE water tank <i>Rate or Lump Sum in Words:</i>	No			

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1637

Part-2 - Mechanical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
5	<u>SANITARY FIXTURES</u>				
5.1	<u>W.C. for Kids</u> Supply and install K.G. W.C. Flush valve with cover as manufactured by Duravit - Bambi No. 018509 or approved equal, or similar to existing, 35 cm height max. from finished floor with timber cover. Cost to include all related connections angle valves and necessary accessories as per the Engineer instructions. Each W.C. should be equipped with a Flushing Hose (Grohe or Ideal standard or approved equal, or similar to existing)				
5.1.1	EWC-03 (Wall Hang - 52 x 32 cm) <i>Rate or Lump Sum in Words:</i>	Nº			
5.2	<u>W.C. For Non Kids</u> Supply and install W.C. for non kids, Flush valve with cover as manufactured by Ideal Standard Item No. E876801 also the hose, or approved equal, or similar to existing, and to be 40 cm from floor finish with timber cover. The work to include the installation, liking, cleaning with all necessary connection, angle valves and necessary accessories similar to the K.G.W.C. Each W.C. should be equipped with a Flushing Hose (Grohe or Ideal standard or approved equal, or similar to existing)				
5.2.1	EWC-01 (Wall Hang - 52 x 36 cm) or as existing <i>Rate or Lump Sum in Words:</i>	Nº			
5.2.3	AWC-01 (Asian water closet) <i>Rate or Lump Sum in Words:</i>	Nº			

Carried To Collection

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1637

Part-2 - Mechanical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
5.3	<u>Lavatories for Kids in the K.G.</u> Supply and install semi pedestal wash basin similar to Ideal Standard No. 742001 or approved equal, or similar to existing, 45 x 36 cm, and fixed at 60 cm high from the floor finish. Cost to include all necessary connections, angle valves and accessories as required				
5.3.1	LAV-03 (semi-pedestal wash basin - 45 x 35 cm) <i>Rate or Lump Sum in Words:</i>	Nº			
5.4	<u>Lavatories for Non Kids</u> Supply and install semi pedestal wash basin similar to Ideal Standard No. 742001 or approved equal, or similar to existing, and fixed at 82 cm high from the floor finish. Cost to include all necessary connections, angle valves, traps and necessary accessories as specified.				
5.4.1	LAV-01 (semi-pedestal with mixers 55 x 45 cm) <i>Rate or Lump Sum in Words:</i>	Nº			
5.6	<u>Self Close Taps on Kids & Students Lavatories</u> Supply and install self close taps to be fixed in the lavatory body as manufactured by Grohe Item No. 36-173, or similar to existing, with all required works and drain accessories including trap, to be connected to the new water supply and drain and as instructed by the Engineer				
5.6.1	Self Close Taps <i>Rate or Lump Sum in Words:</i>	Nº			
5.7	<u>Wall Type Self Close Taps on Drinking Basins</u> Supply and install self close taps to be fixed in the drinking basin body as manufactured by Grohe Item No. 36-176, or similar to existing, with all required works and drain accessories including trap and to be connected to the new water supply and drain and as instructed by the Engineer				
5.7.1	Wall Type Self Close Taps <i>Rate or Lump Sum in Words:</i>	Nº			
Carried To Summary					

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1637

Part-3 - Electrical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
1	<u>BASIC ELECTRICAL REQUIREMENTS</u>				
	The Contractor should revise all the drawings and compare them with the site conditions and redo all the design works with the necessary calculations for all the electrical installations and works. Moreover, the Contractor should submit shop drawings and as-built drawings for the maintenance use in the future. The contractor should provide all the necessary maintenance works for all Electrical systems related to the KG school to ensure its proper works. At the end of the project, the contractor should submit complete As-Built Drawings for all executed works with exact dimensions & sizes for easy maintenance work in the future.				
1.1	<u>Fixing and Repairing</u>				
	Check & repair all the existing cables, wires, socket outlets, lighting fixtures, lighting switches, electric fans, and protect all exposed wiring as per the site conditions, and to the satisfaction of the Engineer. All as per the drawings, specifications and Engineer instructions				
1.1.1	Lighting fixtures	LS	1.00		
	<i>Rate or Lump Sum in Words:</i>				
1.1.2	Wires and cables	LS	1.00		
	<i>Rate or Lump Sum in Words:</i>				
1.1.3	Sockets and switches	LS	1.00		
	<i>Rate or Lump Sum in Words:</i>				
1.1.4	Circuit breakers	LS	1.00		
	<i>Rate or Lump Sum in Words:</i>				
1.1.5	Disconnecting switches	LS	1.00		
	<i>Rate or Lump Sum in Words:</i>				

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1637

Part-3 - Electrical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
1.1.6	Electrical panel boards with grounding <i>Rate or Lump Sum in Words:</i>	LS	1.00		
1.1.9	All needed electrical works ... etc. <i>Rate or Lump Sum in Words:</i>	LS	1.00		

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1637

Part-3 - Electrical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
2	<u>PANELBOARDS</u>				
2.1	Supply, install or rehabilitate the existing panel board if possible including enclosures, busbars, protective devices, MCB & MCCB breakers according to IEC-60947-2 as per the site conditions and Engineer instructions.				
2.1.1	MDB	Nº			
	<i>Rate or Lump Sum in Words:</i>				
					
					

Carried To Collection

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 1637

Part-3 - Electrical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
3	<u>GENERAL LIGHTING INSTALLATIONS</u>				
3.1	<u>Lighting Fixtures</u> Supply, install and test the lighting fixtures complete with all the necessary wires conduits, boxes and accessories required to provide power to each lighting fitting from LP including the earth wire as per the drawings, specifications and Engineer instructions. The Contractor should submit samples of each lighting fixture for approval.				
3.1.1	TYPE C1: Twin T8 LED Tube, surface-mount luminaire for interior, 40W, 4000K, 4700Lm. Polycarbonate, light grey, with injected polyurethane double gasket and clear UV stabilized polycarbonate cover, $\cos \phi \geq 0.9$, or similar to existing.	Nº			
<i>Rate or Lump Sum in Words:</i>					
3.1.4	TYPE A2 / A3: 600x600 mm LED Panel 3600lm, 33W, 4000K, 80CRI surface-mount/recessed, die-cast aluminum, IP20, or similar to existing.	Nº			
<i>Rate or Lump Sum in Words:</i>					
3.1.6	TYPE N4 / N3: LED - 900lm - 12.5W - 3000K - 80CRI - WW Surface mounted / Recessed Downlight Round - 120 deg, or similar to existing.	Nº			
<i>Rate or Lump Sum in Words:</i>					

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 1637

Part-3 - Electrical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
10	<u>LIFTS REHABILITATION</u>				
10.1	Rehabilitation of the existing lift as described in specification, including all coordination, design, execution drawing and details, security of the personnel, scaffolding, labor and equipment necessary for the perfect operation of the lift and to the satisfaction of the engineer				
	Cost to include 5 years maintenance contract with all necessary spare parts and all as needed.				
	For 2 hours (fire rated) having the following characteristics:				
	Capacity: as per existing				
	Speed: as per existing				
	Entrance size/ type: as per site dimensions				
	Opening as per existing	No			
	<u>Rate or Lump Sum in Words:</u>				
					
					

Carried To Summary

Bill of Quantities - Lot-3 - School CERD: 589
El Bireh Elementary Public School

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 589

Summary

<u>Description</u>	<u>Amount (US \$)</u>
Part-1 - Civil, Structural and Architectural Works	
Part-2 - Mechanical Engineering Services	
Part-3 - Electrical Engineering Services	
	
* Total Amount of Bill of Quantities	
* Discount by Tenderer (_____ %)	
	
	
* Total Amount of Tender (VAT Not Applicable)	
	
	
* Total Amount of Tender in Words:	
.....	
.....	
.....	

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 589

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
1	<u>SITE PREPARATION AND DEMOLITION</u>				
1.1	<u>Demolishing and Removal of Debris</u>				
1.1.1	The works include all types of demolition and the removal of debris and damaged elements such but not limited to, the following: - Existing plastering and concrete items such as foundations, columns, slabs, etc. - Damaged Tiling (floors and walls) - Toilet fixtures and pipes installation of all sizes - Counter tops, bases and sinks - Water tanks of different types - Hollow concrete block walls or concrete walls of all sizes - Demolition of the existing ramps / Stairs and the execution of the given plans and specifications - Including the necessary equipment for the removal of debris and all resulting materials - etc. <u>Rate or Lump Sum in Words:</u> 	LS	1.00		

Carried To Collection

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 589

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
2	<u>SITE PREPARATION AND DEMOLITION</u>				
2.3	<u>Existing Walkways</u>				
2.3.1	Repair existing walkways at project site boundary; precast concrete paver tiles, bases courses, etc., as necessary, where damaged or distributed by new construction without affecting the adjacent undamaged areas; make good and joint at junction with new precast concrete paving and/or curbing as required and to Engineer's approval.	LS			
	<i>Rate or Lump Sum in Words:</i>				
2.5	<u>Ramp for External Existing Sidewalk or for accessibility purpose</u>				
2.5.1	Supply and install external pedestrian ramp as per approved shop drawing submitted by contractor Work to include: - Remove parts of sidewalk including curbstone and existing tiles - Remove the debris to outside the site - Submit detailed shop drawing compatible with ADA requirements - Supply and install concrete curbstone for the ramp - Supply and install floor tiles identical to the existing with mortar and all layers - All needed items as per the Engineer instructions	LS			
	<i>Rate or Lump Sum in Words:</i>				
2.9	<u>Rehabilitation of Playground Slabs (External Playground)</u>				
2.9.1	Clean the rehabilitated places by removing all debris and make good all the edges and remove all broken slabs & failed slabs and remove to outside the site all the debris & refused items, cast proper concrete in places where the removal of all debris (No patching is allowed for the existing concrete surfaces) Work to include: - Removal and cleaning the location - Materials, fill - Labors - Make good the surfaces - Lining and marking all playgrounds as per site instructions - All needed refurbishing works as per the Engineer instructions	m ²			
	<i>Rate or Lump Sum in Words:</i>				
	<i>Carried To Collection</i>				

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 589

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
3	<u>CONCRETE</u>				
3.2	Reinforced Concrete Footings, Tie Beams, Columns and Walls Drop - Parapete - Slab on Grade				
3.1.2	Supply, cast and vibrate concrete for footing, tie beams, walls, parapets. Up stand, drop parapets with a crushing strength 350kg/cm2, cost to includes: - Formwork - Steel reinforcement - All needed work as per Specifications and the Engineer instructions <i>Rate or Lump Sum in Words:</i>	m3			

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 589

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
4	<u>MASONRY</u>				
4.1	<u>Hollow or Solid Concrete Blocks and Claustra</u> Supply and install concrete blocks as per drawings Work to include: - All places as per the drawings, and the Engineer instructions. - Materials - Cement mortar and the use of extruded nets and reinforcement by means of metal gates and the placement of angles of galvanized steel iron of concrete columns thickness of 4 mm every 60 cm - Labors and all items needed and instructions by the Engineer				
4.1.2	10 cm hollow concrete blocks <i>Rate or Lump Sum in Words:</i>	m ²			
4.1.4	15 cm hollow concrete blocks <i>Rate or Lump Sum in Words:</i>	m ²			

Carried To Collection

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 589

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
	<i>From Collection</i>				
4.2	<u>Rehabilitate and Clean masonry walls showing deep crack</u> The repair method requires the replacement of some stone masonry that has been damaged by the crack. It will include the use of horizontal reinforcement. Remove cracked stones in a “toothed” pattern to the extent that a sound repair is possible. Clean the crack if it continues to extend into the mass masonry and grout with non shrink mortar. Key new stone in stone masonry perpendicular to the wall surface in addition to the “toothed” and stepped pattern parallel to the wall surface. With larger more extensive cracks remove additional stones in a stepped pattern on both sides and the top of crack and restore by installing new stones. With smaller repairs lesser amounts of stones will have to be removed. Place horizontal reinforcement every 5th course. Mechanical ties to secure geogrid may be required. The horizontal reinforcement shall bridge over the crack and extend the length of new stone masonry. Replicate the coursing pattern of the existing exposed surface. Place new stones that are not exposed in an alternating stretcher-header bonding pattern to wall surface or top of wall. Construct the new stone masonry in complete horizontal courses where possible. Do not construct more than 5 courses before allowing masonry to dry. Lay subsequent stone courses on fresh wet mortar. Apply mortar at head joints as well as bed joints and finish one-half the width of the mortar joint below the surface of the stones.				
4.2.1	<u>Rehabilitate Natural Stone Facades</u> Rehabilitate works on natural stone facades work should be by replacing the damaged stone and not filling with mortar. Work to include: - Determine location of damaged stone walls and location of dampness. Broken or damaged pieces to be replaced, then cleaning & leveling; without affecting the adjacent undamaged - Treat the dampness and the causes - Repair the stone by renewing the damaged and replace it with new ones with same stone and apply one layer of water proofing transparent paint - Clear the place and infill in between the coarse (Lining) - All works as instructed by the Engineer <i>Rate or Lump Sum in Words:</i> Carried To Collection	m ²			

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 589

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
	<i>From Collection</i>				
5	<u>METAL WORKS</u>				
5.1	Provide New Steel Work (Door & Windows)				
5.1.1	Provide new steel doors with related accessories as per <i>Rate or Lump Sum in Words:</i>	Nº			
5.1.3	Provide new double glazed aluminum windows with new burglar proof protection <i>Rate or Lump Sum in Words:</i>	Nº			
5.2	<u>Rehabilitate and Maintain the Existing Steel Work</u> <u>(Burglar Proof Protection + Opening)</u> Rehabilitate the existing steel windows or doors as per specifications and drawings and the Engineer instruction Work to include: - Remove all damaged members and replace by new ones - Rub completely to secure all parts and use putty to make faces smooth - Apply two layers of anti rust paint - Apply putty - Apply three layers of epoxy external paint - All needed items as per the Engineer instructions				
5.2.1	Rehabilitate existing steel doors <i>Rate or Lump Sum in Words:</i>	Nº	1.00		
5.2.2	Rehabilitate existing steel gates <i>Rate or Lump Sum in Words:</i>	Nº			
5.2.4	Rehabilitate existing burglar proof steel protection <i>Rate or Lump Sum in Words:</i>	Nº			
5.2.5	Rehabilitate and paint existing steel louvers with related <i>Rate or Lump Sum in Words:</i>	Nº			
5.2.6	Rehabilitate and paint existing steel window / Curtain Wall <i>Rate or Lump Sum in Words:</i>	Nº			
	<i>Carried To Collection</i>				

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 589

Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
5.3	<u>Rehabilitate Existing Steel Shed Works</u> Rehabilitate the existing steel elements of the existing shed and the work to include: - Remove existing cover (Asbestos, TOT, etc.) and to be dismantled and carted away to outside the site to dumps approved by municipality - Brick tiles to be disassembled and removed and stored in appropriate location as per engineer's instruction and to checked for reused if needed - Clean, rub and repaint all steel structure and do the necessary reinforcement - Damaged steel structure to be replaced with new steel structure similar to existing. - Support and add new beams similar to existing. - Remove existing paint & clean deeply as per SSPC code and ISO 8501 - Apply base and epoxy as specified - Supply the roof covers as per drawings - Install the galvanized steel gutter (No Welded) and all Steel pipe works - Corrugated Metal sheet flashing between walls and shed roof with mastic - All needed items as per the Engineer instructions				
5.3.1	Rehabilitate and strength steel sheds and replace existing sheet by insulated sandwich panel <i>Rate or Lump Sum in Words:</i>	m ²			
5.3.2	Rehabilitate and strength steel sheds and replace existing sheet by polycarbonate triple layer <i>Rate or Lump Sum in Words:</i>	m ²			
5.3.3	Rehabilitate and strength steel sheds and replace existing sheet by insulated sandwich panel with polycarbonate triple layer <i>Rate or Lump Sum in Words:</i>	m ²			
5.3.4	Rehabilitate and strength steel sheds and replace existing sheet by PVC sheet or as exisitng <i>Rate or Lump Sum in Words:</i>	m ²			
<i>Carried To Collection</i>					

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Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
5.3.5	Rehabilitate and strength steel sheds and replace existing sheet by brick tiles <i>Rate or Lump Sum in Words:</i>	m ²			
5.3.6	Rehabilitate and strength existing roof bricks and change broken bricks by new ones <i>Rate or Lump Sum in Words:</i>	m ²			
5.3.7	Rehabilitate connection between wall and corrugated roof, a new gutter to be Provided <i>Rate or Lump Sum in Words:</i>	m			
5.5	<u>Rehabilitate and Maintain Steel Handrail</u> - Rehabilitate the existing metal handrail and remove the damaged members and replace by new - Reinforce the existing handrail with similar members in addition to the rail and all necessary accessories - Remove existing paint & clean deeply as per SSPC code and ISO 8501 - Apply one layer of epoxy base paint - Apply putty - Apply epoxy paint as per specification All needed items as per the Engineer instructions				
5.5.1	Floor Mounted <i>Rate or Lump Sum in Words:</i>	m			
5.5.2	Wall Mounted <i>Rate or Lump Sum in Words:</i>	m			

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Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
6	<u>WOOD AND PLASTICS</u>				
6.1	<u>Joinery Works</u>				
6.1.1	<u>Rehabilitate Existing Kitchen Cupboards</u> Rehabilitate existing cupboards, cabinets, drawers, counters, etc., for the existing kitchen. Works to include replacing damaged elements, accessories, material, labor, equipment, maintaining support, change of the top of counter by new resin counter as specified, etc. As per engineer's approval.				
	- Repair wood elements in accordance with AWI Quality Standards requirements. - Repair framing and sash members with mortise and Tenon joints. Ensure joints and connections are flush, hairline, and weather-tight. - Scarf joints permitted when wood matches in color and grain texture. Form sills and stools in one piece. - Fabricate components with minimum clearances and shim spacing around perimeter of assembly, yet allowing installation and dynamic movement of perimeter seal.				
6.1.1.1	Kitchen Cupboards <i>Rate or Lump Sum in Words:</i>	m			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
7	<u>THERMAL AND MOISTURE PROTECTION</u>				
7.0	<u>Preliminaries</u>				
7.0.2	Dismantle and remove all existing materials on roof: Tiles, Membranes, existing water tanks, Mechanical Pumps and Systems, Electrical Systems, skirting, etc.; and all equipment as per engineer instructions The unwanted/ unused materials should be cart away from the site The remaining items should be reinstalled in a proper way as per engineering instructions <i>Rate or Lump Sum in Words:</i>	LS	1.00		
7.1	<u>Roof Waterproofing</u>				
7.1.1	Works should be applied and done by experts with previous experience in similar works. Works to include: - DEEP cleaning of all surfaces and carting away of dust & - Concrete pad for water tanks as indicated - Sand cement screed layer to Provide proper slopes minimum 0.75% - Expansion joint sealant to be done respecting back rod, unbonding tape, adequate thickness of sealant, type & finish of sealant (fire rated) & design drawings especially on roof & planters. - Provide tackle coat (Proper) - Provide 4mm thick, SBS layer from an approved manufacturer - Provide protection for all pipe works and drains - Provide heat insulation layers of 35 KG/m ³ where required - Provide Geotextile layers - Provide all aluminum flashing with mastic - Provide finishing material as required - All as specified and approved shop drawings <i>Rate or Lump Sum in Words:</i>	m ²			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
8	<u>DOOR AND WINDOWS</u>				
8.1	<u>Wooden Doors and Windows</u>				
	Supply and install all timber work with all related items The joinery works should be of the first class type and as per specifications and drawings Work to include:				
	- Material and labors				
	- All accessories to be heavy duty (Hinged, Lock, Glass vision, as required, etc.)				
	- The frame for any width (Steel, Wood, etc.)				
	- Paint as follows:				
	- Anti rust layers				
	- Putty + one layer of undercoat				
	- Three layers of epoxy paint				
	- Apply and fix 6mm wired clear glass				
	- View Permitting glass opening where needed				
	- remove the existing timber panels				
	- repair the edges				
	- The Contractor should submit shop drawings				
	- All needed items as the Engineer instructions				
8.1.1	<u>Timber Doors</u>				
	Supply and install flush timber door as per drawings with laminated plastic facing and the door should have 10cm width frame between the plywood and fill with timber beads by tongue and groove each 5cm, and the door edges should behead wood and fixed by tongue and groove frames should be as specified, with fixed glass panel vision window, and similar to existing, and to the Engineer's instructions				
	- Works included, all accessories and fittings, pre-painting and finishing paint sides of doors and box frames.				
	- All works should be done as per the Engineer instructions				
8.1.1.1	Provide new double leaf wooden door	No			
	<u>Rate or Lump Sum in Words:</u>				
					
8.1.1.2	Provide new single leaf wooden door with view frame	No			
	<u>Rate or Lump Sum in Words:</u>				
					

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Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
	<i>From Collection</i>				
8.1.3	<u>Rehabilitate the Existing Timber Doors</u> As stated in the Preambles of Item 8.1 In addition, rehabilitate the existing timber doors: The minimum amount of existing timber should be removed to allow an effective repair to be formed. Cut out deteriorated area of timber in sloping splice to give optimum area of surface to be glued & fixed. Well-seasoned timber to be used in forming a repair with the line and density of grain (number of growth rings) of new timber matching the existing as closely as possible. For all joinery work, timber with shakes, fissures, warping, heartwood, sapwood or numerous/large knots should be avoided for use in repair. Always work new material to the line of the existing and avoid unnecessary trimming of original timber. Repairs should follow any existing deformations in the line of the wood element (e.g. door or window). Avoid mixing timber species between new and existing in a repair as joint between the two is likely to fail from different rates of expansion and contraction during dry & damp conditions. Where possible, spliced repairs to be designed to ensure moisture is towards the outer face of timber and that moisture does not lay on the repair joint. The length of the splice is governed by section of timber and the nature of component being repaired and it should be designed to ensure an effective bond between new and existing sections of timber. Where wood element are to be dismantled as part of the repair process, always mark and record the constituent parts before dismantling. similarly, number of glass panes/quarries before removal. If applicable carefully soften putty or remove wood trim and then remove glass. Use glue, to connect a new outer section of bottom rail to the existing sound timber. Drill and insert new wooden pins or fix using brass screws from inside. Casements or sashes are often in sound condition but the joints have become loose due to the break down of glue and loose wedges. The wedges will often be easily removable and will probably be unsuitable for re-use. It may be for the joints to be pulled together successfully. Attach door frame and shims to perimeter opening to accommodate construction tolerances & all irregularities. Align door plumb and level, free of warp or twist. Maintain dimensional tolerances and alignment with adjacent work. Install operating hardware.				
8.1.3.1.1	Rehabilitate and paint existing single leaf timber doors with related accessories <i>Rate or Lump Sum in Words:</i> <i>Carried To Collection</i>	Nº	11.00		

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Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
8.1.3.1.2	Rehabilitate existing double leaf door <i>Rate or Lump Sum in Words:</i>	Nº			
8.1.3.1.4	Rehabilitate wooden windows <i>Rate or Lump Sum in Words:</i>	Nº			
8.2	<u>Aluminum Doors and Windows</u> Fabricate, supply and install aluminum works as manufactured by SIDEM 2000 first choice with all necessary accessories as per the drawings and the Engineer instructions, cost to include all doors and windows: - Reveals hard stone 3cm thick, all around for external opening - Apply EPDM around door and windows where necessary - Single glass 6 mm - Double glass 6-12-6 mm (Outer Glass should be Tempered) - Hinges and locks - Joint Filler - Mosquito Screen - Mesh - All items needed as per the Engineer instructions - All as specified and base on an approved shop drawings after exact dimensions				
8.2.1	<u>New Aluminum Panels (Double Glass)</u> Supply and install the fabricated aluminum panels with double glass (6 - 12 - 6 mm) (Outer Glass should be Tempered or similar to existing)				
8.2.1.1	Provide new aluminum double glazed window & door panel <i>Rate or Lump Sum in Words:</i>	Nº			
8.2.2	<u>New Aluminum Internal Door</u> Supply and install aluminum door with frame and related strengthening stud, Works to include: Materials, and accessories - Labors - All needed items as per the engineer instructions. - Repair all around the opening				
8.2.2.1	Provide new aluminum partition door as indicated. <i>Rate or Lump Sum in Words:</i>	Nº			
<i>Carried To Collection</i>					

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Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
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From Collection

- 8.2.3 Rehabilitation Existing Glazed Aluminum Panels (s)**
Replacing Broken Glass. Fixing Hardware Issues: Check the functionality of latches, hinges, and other hardware. If any parts are broken, replace them with new ones to ensure the window operates smoothly. After repairs, apply a high-quality sealant around the edges to prevent moisture intrusion. If the paint is peeling or faded, consider repainting the frame with a metal paint formulated for aluminum to enhance durability and appearance.

8.2.3.1	Rehabilitate existing windows, doors and gates	Nº	3.00		
	<i>Rate or Lump Sum in Words:</i>				
					
					

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Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
9	<u>FINISHES</u>				
9.1	<u>Cement Plaster</u>				
	Supply and install sand cement plaster on concrete and block wall surfaces as specified				
	The plaster layer should be own a base rough layer				
	The plaster works should be on level points and each point should be at 1.5 m from the second only				
	Work to include:				
	- Materials and accessories (galvanized, wire mesh, cover beds, etc.)				
	- Labors				
	- All addition watering				
	- All tools				
	- Plaster thickness more than 2 cm				
	- All needed items as per drawings and the Engineer instructions				
9.1.1	<u>Internal and External Plaster Works</u>				
9.1.1.1	Supply and apply one layer of sand cement plaster over a rough textured layer of plaster				
	Price included all accessories, material, scaffolding and labor, etc.	m ²			
	<i>Rate or Lump Sum in Words:</i>				
					
					

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Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
From Collection					
9.1.2	<u>Repair of Existing Plaster (Internal - External) (Cracks,</u>				
9.1.2.1	Rehabilitate and repair cracked and damaged plaster indoor and outdoor Work to include: - Determine the location and remove all loose items around the area - Remove the cracked plaster layer - Remove the pulled out layers - Clean the places with suitable materials - Fill all cracks after widening by (No Suggestions) or approved equal. - Remove loose and other deteriorated materials prior to the new repair. Take special care not to damage the adjacent original materials. Prepare mortar joints for installation of lateral reinforcement where it is required. Use thin steel bars to clean joints to maximum depth possible. Remove loose mortar. Mix mortar with minimal amount of water (potable) prior to use. All separation cracks between perpendicular walls shall be filled grout to reduce additional movement from wind loads and thermal expansion-contraction. - Clear debris from crack by probing, brushing, and blowing. - Force non-shrink mortar mixture into crack as deep as possible with hands, wood and metal probes. Use as dry a mix as possible. Use stone bats to fill larger crack voids. Ensure mortar is forced into smaller/deeper cracks. Mortar grout will be fluid in order to flow into crack. Either grout bags or gravity flow shall be used depending on the conditions. Fil Protect repairs from rapid drying by misting, shading, protecting from dry wind cracks in a series of applications rather than one large application. Final application shall not be flush with the surface, but shall be one half the width of the crack below the surface. Remove all tool marks with brush. - Apply the finish rough plaster layer - Install galvanized steel mesh 20 cm width at least - Apply the second smooth plaster layer Rate or Lump Sum in Words: 	LS	1.00		
Carried To Collection					

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Part-1 - Civil, Structural and Architectural Works

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
9.2	<u>Tiling Works</u> Supply and install all tiling items for floors, with the skirting Work to include all materials and labors and the Contractor should use all necessary rods and levels as per the Engineer instructions Price to include: - Sand below tiles - Materials, tiles, mortars - Labors - Rubbing - Filling between tiles - Filling the skirting - Remove unsuitable items - Cleaning the places - All needed items as per the Engineer instructions				
9.2.1	<u>New Full Mass Colored Ceramic for Floors</u> Ceramic tiles and tilework as specified and detailed, installed complete; Including for substrate preparation, cement: sand screeds or plaster backing coats; setting, jointing and grouting; tile trim and accessories; sealants; and all other related ancillaries as indicated or required				
9.2.1.1	Supply and install anti skid colored full mass ceramic tiles for classroom (first choice) for all floor toilets, kitchen and laboratory (existing and new) or similar to existing <i>Rate or Lump Sum in Words:</i> 	m ²			
9.2.1.2	Skirting same type of floors or similar to existing <i>Rate or Lump Sum in Words:</i> 	m			
9.2.2	<u>New Glazed Colored Ceramic for Walls</u>				
9.2.2.1	Supply and install glazed colored ceramic for walls Include Ceramic Corner (first choice as specified or similar to <i>Rate or Lump Sum in Words:</i> 	m ²			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
9.2.3	<u>New Tiles for stairs</u> Supply and install tiles first choice for the new stair (treads 3cm thick - Risers 2cm thick) and landing - tiling 2cm and for all floors or otherwise specified color type and quality to be submitted for approval, works to include: - Labor, materials and installations - Under tile fill - Mortar - Lining - Step (Tread + riser) and landing and all type of skirting - And needed items to complete the works as per the Engineer instructions				
9.2.3.2	Granite 2cm Thick (Tread and Riser) <i>Rate or Lump Sum in Words:</i>	m			
9.2.3.3	Mosaic Similar to existing 4cm Thick minimum (Tread and Riser) <i>Rate or Lump Sum in Words:</i>	m			
9.2.4	<u>Repair existing broken floor tiles and skirting (all types) and reinstall by new, similar to existing for all rooms and</u> ..				
8.2.4.1	Rehabilitate and repair all damaged and broken tiles, and skirting for any type (marble - ceramic - mosaic - Cement). Remove broken or damaged pieces to be replaced without affecting the adjacent undamaged areas Work to include: - Remove all debris as specified - All materials and labors - Difference tiles (shapes thickness, dimension, pattern) as needed. - Cutting and repair - Grouting - Polish and rubbing - All needed items as per Engineer comments and complete to Engineer approval. <i>Rate or Lump Sum in Words:</i>	LS	1.00		
<i>Carried To Collection</i>					

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Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
9.2.5	<u>Rehabilitate Existing Stair Treads and Riser</u> Remove the broken treads and risers, install and supply new ones similar to the existing with the needed side bases, width as per site dimension with skirting and tiles for landing The work to be as per the Engineer instructions				
9.2.5.1	Existing Mosaic Stair the price including Skirting tiles & Landing <i>Rate or Lump Sum in Words:</i>	m			
9.2.6	<u>Threshold Tiles (Doors, Marble Topping)</u> Supply and install 3cm thick threshold as per the Engineer instructions Cost to include: - Fixing materials - All materials - All labors - All Edges must be rounded or chamfered - All needed items as per the Engineer instructions				
9.2.6.1	Natural Stone Threshold or similar to existing <i>Rate or Lump Sum in Words:</i>	m			
9.2.6.2	Marble Coping or similar to existing <i>Rate or Lump Sum in Words:</i>	m			
9.2.6.3	Natural Stone Coping or similar to existing <i>Rate or Lump Sum in Words:</i>	m			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
9.2.7	<u>Clean and Rub the Existing Floor Tiles and Skirting</u> Rehabilitate any type of flooring tiles and skirting (ceramic - mosaic - etc.) Work to include: - All materials and labors - Grouting - Polish and rubbing - All needed items as per the Engineer instruction as specified				
9.2.7.1	Type 1: Marble or similar to existing <i>Rate or Lump Sum in Words:</i>	m ²			
9.2.7.2	Type 2: Ceramic or similar to existing <i>Rate or Lump Sum in Words:</i>	m ²			
9.2.7.3	Type 3: Mosaic or similar to existing <i>Rate or Lump Sum in Words:</i>	m ²			
9.3	<u>Suspended Ceilings</u> The suspended ceiling, work to include: - All panels - All heavy duty hangers and accessories as specified - Rails (hidden type) - Special metal heavy duty suspension systems - All needed heavy duty accessories and items to complete the works - Works to be indicated on drawings and as per the - Works should be coordinated between the starting and the end of the floor panels and also should be coordinated with the electromechanical units in the ceiling - All works should be as instructed by the Engineer				
9.3.1	<u>Metal Sheet Strips Suspended Ceilings:</u>				
9.3.1.3	Rehabilitate Metal Strips <i>Rate or Lump Sum in Words:</i>	m ²			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
9.5	<u>Painting</u>				
9.5.1	<u>Wall and Ceilings Paint Works</u> Wall paint include preparation of the base surfaces to receive the paints and apply the specified layers of putty and paint from the best quality as per specifications and as indicated in drawings The base surfaces should be clean and smooth and free from any pulled out old paints before starting application of the specified primer/undercoat. Apply 2 layers of putty then after smoothening, then 3 layers of the approved paint materials. All works and items should be as per manufacturer recommendation, compatible with each other and as per the Engineer instructions and approval, <i>All paint types must be <u>lead-free</u> and <u>Low VOC</u> (Volatile Organic Compounds)</i>				
9.5.1.2	Super Rubber Paint for old walls and ceilings <i>Rate or Lump Sum in Words:</i>	m ²	1,150.00		
9.5.1.4	Oil Paints for old walls and ceilings <i>Rate or Lump Sum in Words:</i>	m ²	15.00		
9.5.2	<u>Outside Walls Paint (Old and New Walls and Ceilings)</u>				
9.5.2.1	Paint for external old and new walls, smooth touch Work to include: - Removal of any paint or obstacle - Rehabilitate the surfaces and make them goods - Polyurethane where needed for cracks - Apply one coat of undercoat - Apply 2 coats of external paint or rolled textured paint - Apply one layer of external transparent paint (acrylic styrene copolymer elastic water proof) - All needed scaffolding and materials for the best execution of the works - All works and items should be as per manufacturer and the Engineer instructions and approval. <i>Rate or Lump Sum in Words:</i>	m ²			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
10	<u>SPECIALTIES</u>				
10.1	<u>Bathrooms Accessories</u>				
	- Remove and cart away old damaged fixtures				
	- Supply and install all needed accessories and make good their places and their surroundings				
	- Place all frame, cover joints (stainless steel) anti-corrosion				
	- Install items and their contact with the surfaces				
	- All works should be done as per the Engineer instructions				
10.1.2	<u>Soap Dispenser</u>				
10.1.2.1	Supply and install stainless steel 316 no rust, no stain, soap dispenser wall type fixation (anti-rust materials and accessories) with all needed items or similar to existing				
	All works should be done as the Engineer instructions	No			
	<i>Rate or Lump Sum in Words:</i>				
					
10.1.4	<u>Mirror for Lavatories</u>				
	Supply and install 6mm glass mirror for lavatories with colored PVC frames as show on drawings and as stated in the specifications with all needed items and accessories or similar to existing				
	The mirror should be placed on 3mm thick plywood from the back				
	All works should be done as the Engineer instructions				
10.1.4.1	Mirror (Dimension as per site conditions and engineer instruction)	No			
	<i>Rate or Lump Sum in Words:</i>				
					

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Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
10.3	<u>Resin Work</u>				
10.3.1	<u>Drinking Basin</u>				
	Supply and install drinking basin as shown on drawings of resin layers 12 mm thick fixed on galvanized steel skeleton 4 x 4 cm hollow sections and as shown on drawings				
	Work to include:				
	- Materials				
	- Labors				
	- Galvanized steel skeleton				
	- All needed items and as instructed by the Engineer				
10.3.1.1	Drinking Basin -Length (up to 2.20 m)	Nº			
	<i>Rate or Lump Sum in Words:</i>				
					
10.3.1.5	Drinking Basin -Length (3.81 to 4.10 m)	Nº			
	<i>Rate or Lump Sum in Words:</i>				
					
10.3.1.6	Drinking Basin -Length (4.11 to 6.20 m)	Nº			
	<i>Rate or Lump Sum in Words:</i>				
					
10.3.2	<u>Lavatory Countertop</u>				
10.3.2.1	Supply and install complete counter for lavatories in toilets where shown on drawings to be of 12mm resin layer as per drawings and the work to include:				
	- All fixing elements				
	- All stainless steel hangers				
	- All necessary heavy duty accessories				
	- Counter edge of 30cm length				
	- All needed items and as instructed by the Engineer	m			
	<i>Rate or Lump Sum in Words:</i>				
					

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Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
	<i>From Collection</i>				
10.3.4	<u>Kitchen Counter</u>				
	Supply and install complete counter resin type with sink (resin) for teachers' kitchen of 18mm thick including coved splash back 20cm height and the work to include:				
	- All fixing elements				
	- All stainless steel hangers				
	- All necessary accessories				
	- All needed items and as instructed by the Engineer				
10.3.4.2	Kitchen Counter - Length (1.11 to 1.75m)	No			
	<u>Rate or Lump Sum in Words:</u>				
10.8	<u>Complete Accessible Toilet</u>				
10.8.1	Supply, construct, install, test and commission one complete accessible toilet, including all necessary civil, architectural, plumbing and ventilation works, fully coordinated and ready for use. The item shall include, but not be limited to, hollow concrete block walls, cement plaster and painting, ceramic floor and wall tiles, PU waterproofing, complete water supply piping and connections, complete drainage piping and connections, accessible WC and washbasin/lavatory, all required sanitary fittings and accessories, grab bars and other accessibility provisions, ventilation system, and external-grade plastic laminate door with all required ironmongery and fittings.				
	The Contractor shall verify all dimensions, levels, access requirements and existing site conditions prior to commencement of works and shall ensure that the toilet dimensions and layout comply with applicable accessibility requirements and are suitably adapted to the actual location and site constraints.				
	The Contractor shall prepare and submit complete coordinated shop drawings, including plans, sections, elevations, dimensions, sanitary and plumbing layouts, accessibility provisions, door details and all relevant details, for the Engineer's review and approval prior to execution. The rate shall include all materials, labour, fittings, supports, connections, testing, making good and all other incidental works necessary to provide a complete, functional and fully operational accessible toilet in accordance with the approved shop drawings, Drawings, Specifications, accessibility requirements and applicable standards				
	- Complete Accessible Toilet	item			
	<u>Rate or Lump Sum in Words:</u>				
	Carried To Summary				

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 589

Part-2 - Mechanical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
1	<u>GENERAL TECHNICAL REQUIREMENTS</u>				
1.1	<u>General Mechanical Requirements</u>				
1.1.2	Prepare the shop drawings for all mechanical works (where needed) and obtain approval from the Engineer before the start of executing any work. <i>Rate or Lump Sum in Words:</i>	Item	1.00		
1.2	<u>Rehabilitation Works General Requirements</u> Provide all necessary rehabilitation works and make all Mechanical systems in good condition complete including maintenance, cleaning, relocation works, replacing damaged items and equipment, removing and carting away resulting materials and equipment, testing and commissioning, and all other related works to ensure all Mechanical systems are properly working and functional.				
1.2.1	Maintenance and rehabilitation of existing plumbing works, including sanitary fixtures, changing Wc Covers, floor drains, roof drains, manholes, pumps, WC tanks, adding where applicable all necessary valves, flush valves, Traps, Elbow ...etc. removing newly installed showers, and all other necessary works. <i>Rate or Lump Sum in Words:</i>	Item	1.00		

Carried To Collection

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 589

Part-2 - Mechanical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
2	<u>SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION</u>				
2.1	<u>Drainage System</u> Supply, install and test the storm water drainage from (UPVC) pipes inside the building to outside and the pipes to be measured in Linear Meter with all related accessories, cleanout, elbows, vent hangers, and all necessary accessories as per standard installation details				
2.1.1	Ø 50 mm / UPVC <i>Rate or Lump Sum in Words:</i>	m			
2.1.2	Ø 75 mm / UPVC <i>Rate or Lump Sum in Words:</i>	m			
2.1.3	Ø 110 mm / UPVC <i>Rate or Lump Sum in Words:</i>	m			
2.2	<u>Floor Drain</u> Supply and install floor drain P.V.C. with chrome plated brass drain cover and to be the same level as the floor and do all necessary installation and connections. This includes all civil works and connection to the proper floor pipes and as per the Engineer instructions				
2.2.1	FD-01: Ø75 mm bottom outlet <i>Rate or Lump Sum in Words:</i>	Nº			
2.3	<u>Drain Cover</u> Supply and install floor drain cover (P.E) or (similar to existing) 5 mm thick on drainage pipe and to be the same level of the floor tiling. Work to include all civil works and as per the				
2.3.1	Cover for FCO <i>Rate or Lump Sum in Words:</i>	Nº			

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Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 589

Part-2 - Mechanical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
3	<u>WATER PIPE WORK INSTALLATION</u>				
3.1	<u>Water Tanks</u> Supply & install polyethylene water tank (3 layers) or more with all necessary supply and over flow connections all as per the Engineer instructions				
3.1.2	2000 liters PE water tank <i>Rate or Lump Sum in Words:</i>	No			

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Lebanon Emergency Assistance Project (LEAP)
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Bill of Quantities - Lot-3 - School CERD: 589

Part-2 - Mechanical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
5	<u>SANITARY FIXTURES</u>				
5.1	<u>W.C. for Kids</u> Supply and install K.G. W.C. Flush valve with cover as manufactured by Duravit - Bambi No. 018509 or approved equal, or similar to existing, 35 cm height max. from finished floor with timber cover. Cost to include all related connections angle valves and necessary accessories as per the Engineer instructions. Each W.C. should be equipped with a Flushing Hose (Grohe or Ideal standard or approved equal, or similar to existing)				
5.1.1	EWC-03 (Wall Hang - 52 x 32 cm) <i>Rate or Lump Sum in Words:</i>	Nº			
5.2	<u>W.C. For Non Kids</u> Supply and install W.C. for non kids, Flush valve with cover as manufactured by Ideal Standard Item No. E876801 also the hose, or approved equal, or similar to existing, and to be 40 cm from floor finish with timber cover. The work to include the installation, liking, cleaning with all necessary connection, angle valves and necessary accessories similar to the K.G.W.C. Each W.C. should be equipped with a Flushing Hose (Grohe or Ideal standard or approved equal, or similar to existing)				
5.2.1	EWC-01 (Wall Hang - 52 x 36 cm) or as existing <i>Rate or Lump Sum in Words:</i>	Nº			
5.2.3	AWC-01 (Asian water closet) <i>Rate or Lump Sum in Words:</i>	Nº			

Carried To Collection

**Lebanon Emergency Assistance Project (LEAP)
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Part-2 - Mechanical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
5.3	<u>Lavatories for Kids in the K.G.</u> Supply and install semi pedestal wash basin similar to Ideal Standard No. 742001 or approved equal, or similar to existing, 45 x 36 cm, and fixed at 60 cm high from the floor finish. Cost to include all necessary connections, angle valves and accessories as required				
5.3.1	LAV-03 (semi-pedestal wash basin - 45 x 35 cm) <i>Rate or Lump Sum in Words:</i>	Nº			
5.4	<u>Lavatories for Non Kids</u> Supply and install semi pedestal wash basin similar to Ideal Standard No. 742001 or approved equal, or similar to existing, and fixed at 82 cm high from the floor finish. Cost to include all necessary connections, angle valves, traps and necessary accessories as specified.				
5.4.1	LAV-01 (semi-pedestal with mixers 55 x 45 cm) <i>Rate or Lump Sum in Words:</i>	Nº			
5.6	<u>Self Close Taps on Kids & Students Lavatories</u> Supply and install self close taps to be fixed in the lavatory body as manufactured by Grohe Item No. 36-173, or similar to existing, with all required works and drain accessories including trap, to be connected to the new water supply and drain and as instructed by the Engineer				
5.6.1	Self Close Taps <i>Rate or Lump Sum in Words:</i>	Nº			
5.7	<u>Wall Type Self Close Taps on Drinking Basins</u> Supply and install self close taps to be fixed in the drinking basin body as manufactured by Grohe Item No. 36-176, or similar to existing, with all required works and drain accessories including trap and to be connected to the new water supply and drain and as instructed by the Engineer				
5.7.1	Wall Type Self Close Taps <i>Rate or Lump Sum in Words:</i>	Nº			
Carried To Summary					

**Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters**

Bill of Quantities - Lot-3 - School CERD: 589

Part-3 - Electrical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
1	<u>BASIC ELECTRICAL REQUIREMENTS</u>				
	The Contractor should revise all the drawings and compare them with the site conditions and redo all the design works with the necessary calculations for all the electrical installations and works. Moreover, the Contractor should submit shop drawings and as-built drawings for the maintenance use in the future. The contractor should provide all the necessary maintenance works for all Electrical systems related to the KG school to ensure its proper works. At the end of the project, the contractor should submit complete As-Built Drawings for all executed works with exact dimensions & sizes for easy maintenance work in the future.				
1.1	<u>Fixing and Repairing</u>				
	Check & repair all the existing cables, wires, socket outlets, lighting fixtures, lighting switches, electric fans, and protect all exposed wiring as per the site conditions, and to the satisfaction of the Engineer. All as per the drawings, specifications and Engineer instructions				
1.1.1	Lighting fixtures	LS	1.00		
	<i>Rate or Lump Sum in Words:</i>				
1.1.2	Wires and cables	LS	1.00		
	<i>Rate or Lump Sum in Words:</i>				
1.1.3	Sockets and switches	LS	1.00		
	<i>Rate or Lump Sum in Words:</i>				
1.1.4	Circuit breakers	LS	1.00		
	<i>Rate or Lump Sum in Words:</i>				
1.1.5	Disconnecting switches	LS	1.00		
	<i>Rate or Lump Sum in Words:</i>				

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 589

Part-3 - Electrical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
1.1.6	Electrical panel boards with grounding <i>Rate or Lump Sum in Words:</i>	LS	1.00		
1.1.9	All needed electrical works ... etc. <i>Rate or Lump Sum in Words:</i>	LS	1.00		

Carried To Collection

Lebanon Emergency Assistance Project (LEAP)
Rehabilitation of Schools-Shelters

Bill of Quantities - Lot-3 - School CERD: 589

Part-3 - Electrical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
2	<u>PANELBOARDS</u>				
2.1	Supply, install or rehabilitate the existing panel board if possible including enclosures, busbars, protective devices, MCB & MCCB breakers according to IEC-60947-2 as per the site conditions and Engineer instructions.				
2.1.1	MDB	Nº			
	<i>Rate or Lump Sum in Words:</i>				
					
					

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Lebanon Emergency Assistance Project (LEAP)
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Bill of Quantities - Lot-3 - School CERD: 589

Part-3 - Electrical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
3	<u>GENERAL LIGHTING INSTALLATIONS</u>				
3.1	<u>Lighting Fixtures</u> Supply, install and test the lighting fixtures complete with all the necessary wires conduits, boxes and accessories required to provide power to each lighting fitting from LP including the earth wire as per the drawings, specifications and Engineer instructions. The Contractor should submit samples of each lighting fixture for approval.				
3.1.1	TYPE C1: Twin T8 LED Tube, surface-mount luminaire for interior, 40W, 4000K, 4700Lm. Polycarbonate, light grey, with injected polyurethane double gasket and clear UV stabilized polycarbonate cover, $\cos \phi \geq 0.9$, or similar to existing.	Nº			
	<i>Rate or Lump Sum in Words:</i>				
3.1.4	TYPE A2 / A3: 600x600 mm LED Panel 3600lm, 33W, 4000K, 80CRI surface-mount/recessed, die-cast aluminum, IP20, or similar to existing.	Nº			
	<i>Rate or Lump Sum in Words:</i>				
3.1.6	TYPE N4 / N3: LED - 900lm - 12.5W - 3000K - 80CRI - WW Surface mounted / Recessed Downlight Round - 120 deg, or similar to existing.	Nº			
	<i>Rate or Lump Sum in Words:</i>				

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Lebanon Emergency Assistance Project (LEAP)
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Part-3 - Electrical Engineering Services

Item	Description	Unit	Estimated Quantity	Unit Rate (US \$)	Amount (US \$)
<i>From Collection</i>					
10	<u>LIFTS REHABILITATION</u>				
10.1	Rehabilitation of the existing lift as described in specification, including all coordination, design, execution drawing and details, security of the personnel, scaffolding, labor and equipment necessary for the perfect operation of the lift and to the satisfaction of the engineer Cost to include 5 years maintenance contract with all necessary spare parts and all as needed. For 2 hours (fire rated) having the following characteristics: Capacity: as per existing Speed: as per existing Entrance size/ type: as per site dimensions Opening as per existing <i>Rate or Lump Sum in Words:</i>	No			

Carried To Summary