REPUBLIC OF LEBANON

COUNCIL FOR DEVELOPMENT AND RECONSTRUCTION

LEAP - Lebanon Emergency Assistance Project

Rehabilitation of Shelters (Public Schools & TVET)

Batch 5: Lot 1, Lot 2 and Lot 3

Lot 2: West Bekaa, Zahle and Rashaya

Tender Documents

Volume 3
Bill of Quantities

A. CHEHAB ARCHITECTS & ENGINEERS
COMMON SEAL
REPUBLIC OF LEBANON

September 2026
Rev. 1

ABDULWAHED CHEHAB
Consulting Engineering Office

Lebanese Emergency Assistant Project (LEAP)
Rehabilitation of Shelters

Batch 5 Lot 2

West Bekaa

1	1571-Lala Secondary Public School
2	1008-Qaraoun Intermediate Public School
3	1006-Saghbine Secondary Public School
4	994-Ghazze Intermediate Public School
5	991-Kamed El Laouz Secondary Public School
6	990-Kamed El Laouz Intermediate Public School
7	987-Joub Jannine Mixed Public School
8	984-Almarj Intermediate Public School
9	980-Al Mansora Intermediate Public School

Zahle

1	1421-Hay El Fadel Elementary Public School
2	840-Bouarej Mixed Intermediate Public School
3	838-Maxeh Mixed Public School
4	831-Bar Elias Secondary Public School
5	798-Hosh El Oumara Intermediate Public School
6	TVET 5-Qab Elias Technical Public School
7	TVET 6-Hosh El Oumara Technical Public School

Rashaya

1	1352-Rafeed Secondary Public School
2	1041-Jebfarah and Izz El Arab Public School
3	1038-Majdal Balhis Intermediate Public School
4	1027-Kfardanis Intermediate Public School
5	1024-Kherbet Rouha Mixed Public School
6	1022-Mazraat Ezzeh Public School
7	1021-Biri Intermediate Public School
8	1019-Rafeed Intermediate Public School

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Preamble


A. CHEHAB ARCHITECTS & ENGINEERS
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Item	Description

1 INTRODUCTION

1.01 The rules contained in this Preamble apply equally to both proposed and executed works.

1.02 The Bills of Quantities are to be read and construed in association with the Drawings, the Specification and this Preamble. Information which is given on the Drawings and/ or in the Specification is identified by cross references included in the descriptions of work in the Bill of Quantities.

1.03 Where work cannot be fully described or where the quantity of work required cannot be accurately determined, it is given as an item or a Provisional Sum.

1.04 Unless the term meter, used in this Preamble, is proceeded by the words square or cubic it is deemed to be linear.

1.05 The rates inserted by the Tenderer in the Bill of Quantities shall be in words and figures. In the case of discrepancy between the two, the rates written in words shall govern.

2 QUANTITIES

2.01 Quantities set out in the Bills of Quantities are the estimated quantities and they shall not be taken as the actual and correct quantities for ordering and purchasing of materials

2.02 Works shall be measured net as fixed in position in accordance with the rules contained in this preamble or except where otherwise stated in a measurement rule applicable to the work.

2.03 Dimensions used in calculating quantities are taken to the nearest integer (0.5 and over is regarded as 1 and less than 0.5 is disregarded).

2.04 Quantities measured in tonnes are given to two places of decimals. Quantities measured in other units of mass are given to the nearest whole unit except that any quantity less than one unit is given as one unit.

2.05 Unless otherwise stated, where minimum deductions for voids are dealt with in this Preamble they refer only to openings which are within the boundaries of measured areas. Openings which are at the boundaries of measured areas are always deducted irrespective of size.

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Item	Description
3	**DESCRIPTIONS**
3.01	Headings to groups of items in the Bill of Quantities are to be read as part of the descriptions of the items to which the headings apply.
3.02	Dimensions are stated in descriptions generally in the sequence, length, width, height. Where ambiguity could arise, the dimensions are identified.
3.03	Dimensions given in descriptions are in millimeters unless otherwise indicated.
3.04	Unless otherwise specifically stated in the Bill of Quantities or herein, the following are deemed to be included in all work:

- labor and all costs in construction therewith,
- materials, products, goods and all costs in connection therewith,
- Contractor's equipment, including but not limited to construction plant, scaffolding, tools, vehicles and the like and all costs in connection therewith,
- assembling, fitting and fixing materials, products and goods in position,
- any method of fixing, fixing to any nature of base or background including preparation and providing fixing materials,
- breaking down for transport and installation and subsequent reassembly of composite items manufactured off site,
- waste of materials,
- square, raking and curved cutting,
- work at any location or height,
- work in small, isolated quantities,
- protection of all work,

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Item **Description**

- protection of all existing structures, utilities, site improvements, trees and vegetation, features, pavements and other facilities on and adjacent to the site, which are to remain upon completion of the work,

- all other enabling tasks associated and subsidiary components and items of work which are indicated or reasonably inferred from the Drawings and/ or Specification and necessary to perform and complete the work described,

- establishment and overhead charges and profit.

3.05 Except where items are included in the Bill of Quantities and are priced separately by the Contractor therein, provision of the following are deemed to be included with all work:

- site administration and security,

- insurances,

- bonds and guarantees,

- water for the Works,

- lighting and power for the Works,

- temporary accommodation for the use of the Contractor and the Engineer,

- temporary telephones and the cost of calls for the use of the Contractor and the Engineer,

- temporary roads, hardstandings, crossings and the like,

- temporary fencing, hoardings, screens, fans, footways, guardrails, gantries and the like,

- giving notices and making applications, including the payment of fees and charges in connection therewith,

- safety, health and welfare of workpeople,

- compliance with traffic regulations

- maintenance of public and private roads, services and adjoining property,

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Item	Description

- control of noise and pollution, prevention of fire and compliance with all other statutory and general obligations,

- removing rubbish, protective casings and coverings, and cleaning the Works on completion,

- drying the Works,

- testing and commissioning of service installations including the provision of fuel,

- samples of materials and testing of materials including providing equipment for testing,

- design, co- ordination, installation and as- built record drawings and the like,

- preparation and submittal of reports, records, certificates, notices, proposals, designs, details, calculations and other information and data required by the Specification,

- allow in unit rates for all other requirements, services, provisions, liabilities and obligations contained in the General Requirements and Conditions of Contract.

- Maintaining, adapting, clearing away and making good are deemed to be included with the items for temporary works.

- Payment of any customs and other import duties, harbor and port dues, wharf age, landing, pilotage and any other charges or dues including demurrage charges on any Goods or other things required for or in connection with the Works entering or leaving the country.



Item	Description

4 SYMBOLS, ABBREVIATIONS & DEFINITIONS

4.01 The following symbols and abbreviations are used in this Preamble and in the Bills of Quantities:

Lump Sum ….... LS
Linear Meter ….... m
Square Meter ….... m²
Cubic Meter ….... m³
Centimeter ….... cm
Millimeter ….... mm
Number ….... №
Kilogramme ….... kg
Tonne ….... T
Percentage ….... %
Nominal Diameter ….... Φ
Quantity ….... Qty
Drawing ….... Drg / Dwg
Mega Pascal ….... MPa

4.02 The following definitions apply to all work:

- 'horizontal' means level or sloping work not exceeding 15º from the horizontal
- 'sloping' means sloping work exceeding 15º but not exceeding 80º to the horizontal,
- 'vertical' means work exceeding 80º from the horizontal,
- 'curved' means curved in any direction or in more than one direction and to any radius or radii and includes curved work to domes, vaults and the like.

4.03 The term 'extra over' means that work so described involves extra cost over the basic work in which it occurs. No deduction of the quantity of basic work is made for the extra over work.

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Item	Description
5	**MECHANICAL ENGINEERING SERVICES PREAMBLE**
5.01	Mechanical equipment has been measured in complete items unless otherwise stated in the specification and bill item. The rates for all items shall include for supplying all materials, fixing, terminating and connecting all accessories and components for a complete and functional item.
5.02	The Contractor shall consult the relevant sections of the specification when query or doubt arise.
5.03	The Contractor shall consult with, and employ specialist sub-contractors for specific items of work as identified in the specification. All costs associated with such works shall be included in the tender. Specialist sub-contractors will be of recognized expertise, acceptable to the engineer.
5.04	All items of mechanical plant shall be connected to the control and power systems by wiring out from the mechanical control centers. All wiring shall be carried out by competent and qualified electricians under the mechanical scope of works.
5.05	Rates/prices entered against the items shall include for all costs in connection with the following:
a.	Connection items of plant and equipment as necessary to the control and power systems.
b.	Provision of starter's, protective devices, automatic change over/load shedding facilities, remote & local isolation/emergency shut off as appropriate, control functions and alarms to achieve the intent outlined in the Control Section of the Specification. All motors to be of the 'Low Energy' type as specified.
c.	Off loading, storing, connecting up, protecting as necessary, testing, flushing, cleaning, charging, balancing, commissioning and testing individual items of plant as well as complete systems installations all as specified & directed by Engineer.
d.	Supports, brackets and fixings of every description required to complete the works.
e.	Cutting or forming all holes, mortises, chases and the like in the structure to facilitate the various works and making good in all trades as necessary;
f.	Coordination with other associated trades, designers and specialists, at the time preparing shop drawings and during the works progress.
g.	Cost of the items in the BOQ includes all works, materials and labors of all items mentioned above.



Item	Description
6	**ELECTRICAL ENGINEERING SERVICES PREAMBLE**
6.01	Rates for all items of equipment and materials shall be inclusive of all labor, electric power during installation and testing oxygen, acetylene, water, transport, rigging, temporary works, stores, offices, instruments insurance, customs, duties, overhead, profit certificates, samples, tests, supply of all information and data, supply of catalogues, charts, curves, submittals, certified drawings and all other information and services called for in the specification, all fully connected up and good working order. Rates shall also include for:
a.	All builders work in connection with fixing of supports brackets, clips as required
b.	Cutting or forming all openings, mortises, chases, etc., in floors, walls and ceiling required for the installation and making good after
c.	Construction of manholes, handholes and the like
d.	Fitting of access doors in walls and ceilings.
e.	Supplying and fixing supports, brackets and clips as required.
f.	Cutting away and making good after all trades for frames, sleeves, cables, cable trays, chases for conduits and fixing of electrical boxes, conduits, accessories.
g.	Excavating and back filling trenches for cables, pipes and providing and laying precast concrete protective tiles.
h.	Repair, repaint and generally make good and leave in perfect condition all the work executed by him under the contract.
I.	All other work in connection with the installation that is not measured separately.
j.	Electrical equipment is enumerated unless otherwise stated and the rates shall include for supplying all materials labor, plant, fixing, terminating and connecting accessories, etc.
k.	Feeder cables are measured in linear meters from the boards to equipment, or from the distribution board to sub-main, etc. Rates shall include for the supply of materials, laying, terminating, trenching, cable trays, ducting, etc.

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Item	Description
l.	Lighting points are enumerated and the rates shall include all necessary wires, conduits, boxes and accessories, etc., required to provide power from the LP boards switch panels and switches are measured separately.
m.	Lighting fittings are enumerated and the rates shall include the supply, installation and connections.
n.	Disconnecting/Isolating switches are enumerated and the rates shall include all necessary wires, conduits, boxes etc. If the switches are fed by cables, then the cables are measured separately.
o.	Lighting switches, sockets, fan/coil unit spur boxes, fused spurs for fans, kitchen, laundry equipment outlets, toilet fans points are enumerated and the rates for each shall include all wiring, conduits, accessories etc.
p.	Earthing systems to include for all materials, labor, fixing, terminating, earth pits, rods, conductors, excavations.
q.	Main distribution board, sub-mains, lighting and power panels, panel boards, etc., are enumerated items and rates shall include all the board installed completely as specified and as shown on the drawings. (cables are measured separately)
r.	End of session bell system is one item. Bells and bell push button, are enumerated and include all conducting, wiring, controls, and all necessary accessories.
s.	Lightning protection system, roof conductors, tie conductors down conductors are measured in linear meters completely installed.
t.	Earth pits are enumerated. The cost shall include all materials, wiring, fixing, supports, etc., and bolting copper conductors to rebars to have a complete working system.
u.	The rates for automatic transfer switches include the switches completely installed with all ancillary equipment, control, modules to have a complete working system.
v.	Cost of the items in the BOQ includes all works, materials and labors of all items mentioned above.

End of Preamble

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Bill № 1: General Requirements



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
	Notes These General Requirements are applicable to the whole of the Works. If the Tenderer wishes to price any of the items contained herein, then each such item, clause, or sub-clause must be individually priced. The Tenderer shall not enter lump sums covering more than one or all items, clauses and sub-clauses. If the General Requirements item has not been priced it will be deemed that the value of such item, clause or sub-clause is included in the rates for measured items elsewhere in the Bill of Quantities.				
1	**Preliminaries**				
1.01	Insurance Provide the following insurances from an approved insurance company, all as detailed in the Conditions of Contract. - Professional Indemnity Insurance. - Contractor's All Risk Insurance. - Plant and Equipment Insurance. - Workmen Compensation Insurance. - Third Party Insurance. *Lump Sum in Words:*	LS	1		
1.02	Programme of Works Prepare and submit to the Engineer for approval a detailed Programme for the construction showing the proposed order & method to execute the Works, the dates upon which the various elements, trades, sections and items of Works will be started and completed, and the cash flow estimate, complete including monthly forty-five day program, all necessary revisions and updates, monitoring, all supporting data, computer analysis schedules, and all other related works, all to Engineer's satisfaction. *Lump Sum in Words:*	LS	1		
	Preliminaries **Total Carried To Collection**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**Additional Items**				
	The Contractor shall list below any Additional Items that he considers to be of value and for which he wishes to include in his Tender, and shall include details of quantities and rates accordingly.				
2.01	….. ….. *Lump Sum in Words:*	LS			
2.02	….. ….. *Lump Sum in Words:*	LS			
2.03	….. ….. *Lump Sum in Words:*	LS			
2.04	….. ….. *Lump Sum in Words:*	LS			
2.05	….. ….. *Lump Sum in Words:*	LS			
	Additional Items **Total Carried To Collection**				

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Collection

Page №		Amount (US $)
1.1	Preliminaries	.....
1.2	Additional Items	.....
	Total Carried to General Summary	.....



General Summary
Batch 5 - Lot 2



General Summary

	Description	Amount (US $)
	General Requirements	
1	1571-Lala Secondary Public School	
2	1008-Qaraoun Intermediate Public School	
3	1006-Saghbine Secondary Public School	
4	994-Ghazze Intermediate Public School	
5	991-Kamed El Laouz Secondary Public School	
6	990-Kamed El Laouz Intermediate Public School	
7	987-Joub Jannine Mixed Public School	
8	984-Almarj Intermediate Public School	
9	980-Al Mansora Intermediate Public School	
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11	840-Bouarej Mixed Intermediate Public School	
12	838-Maxeh Mixed Public School	
13	831-Bar Elias Secondary Public School	
14	798-Hosh El Oumara Intermediate Public School	
15	TVET 5-Qab Elias Technical Public School	
16	TVET 6-Hosh El Oumara Technical Public School	
17	1352-Rafeed Secondary Public School	
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19	1038-Majdal Balhis Intermediate Public School	
20	1027-Kfardanis Intermediate Public School	
21	1024-Kherbet Rouha Mixed Public School	
22	1022-Mazraat Ezzeh Public School	
23	1021-Biri Intermediate Public School	
24	1019-Rafeed Intermediate Public School	
	Provisional Sum:	
*	Total Amount of Bill of Quantities ……	
*	Discount by Tenderer (_____ %) ……	
*	Total Amount of Tender (VAT Not Applicable) ……	
*	Total Amount of Tender in Words:	

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Bill № 2: Civil and Architectural Works



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**SITE PREPARATION AND DEMOLITION**				
1.1	**Demolishing and Removal of Debris**				
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. ***Rate or Lump Sum in Words:***	LS	1		
1.1a New Item	**Dismantling** The works include the dismantling works related to the newly installed water tanks and prefabricated units. - The contractor shall deliver the dismantled items to the Building administration / MEHE. ***Rate or Lump Sum in Words:***				
1.1.1.a New Item	Water Tanks ***Rate or Lump Sum in Words:***	№			
1.1.1.b New Item	Prefabricated Units ***Rate or Lump Sum in Words:***	№			
1.1.1.c New Item	Partitions of any type ***Rate or Lump Sum in Words:***	m2			
	SITE PREPARATION AND DEMOLITION **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**EXTERNAL WORKS**				
2.4 2.4.2	**School Fences with Related Gates** Rehabilitate Existing Fence (Strengthening & Rehabilitation) Work to include - Rehabilitate and support all the existing fence as per drawings - Determine the places that requires support - Preparation of shop drawings - Replace all broken elements - Redo all damaged elements and to be similar to existing elements - Finishing works as existing (plastering, paints, stone cladding, etc.) - Rehabilitate existing steel protection (Replace all damaged part by new similar to existing and paint with epoxy as specified) - Replace existing chain link by new one (Galvanized) - Reconstruct the broken and damaged parts and rehabilitate as it was with all similar materials including steel parts with related epoxy paint as per the engineer instructions ***Rate or Lump Sum in Words:***	m			
2.5 2.5.1	**Ramp for External Existing Sidewalk** 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 ***Rate or Lump Sum in Words:***	LS			
	EXTERNAL WORKS **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**CONCRETE** **Not Applicable**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
4	**MASONRY**				
	SITE PREPARATION AND DEMOLITION **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**METAL WORKS**				
5.1	**Provide New Steel Work (Door & Windows)**				
5.1.3	Provide new double glazed aluminum windows with new burglar proof protection ***Rate or Lump Sum in Words:***	№			
5.2	**Rehabilitate and Maintain the Existing Steel Work (Burglar Proof Protection + Opening)** 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 ***Rate or Lump Sum in Words:***	№			
5.2.7b New Item	Rehabilitate existing steel doors work to include all door accessories such as lock, handle and all necessary accessories. ***Rate or Lump Sum in Words:***	№			
5.5a New Item	**Steel Handrail** - Provide new metal handrail similar to exist with all all necessary accessories - Apply one layer of epoxy base paint - Apply putty - Apply epoxy paint as per specification All needed items as per the Engineer instructions				
5.5.1a New Item	Above Parapet ***Rate or Lump Sum in Words:***	m			
	METAL WORKS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
6	**WOOD AND PLASTICS**				
6.1	**Joinery Works**				
6.1.1	**Rehabilitate Existing Kitchen Cupboards** 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 ***Rate or Lump Sum in Words:***	m			
6.1.2	**Rehabilitate Timber Cupboard** Rehabilitate timber cupboards with plastic laminate color, work to include sub framing, drawer units, shelves, fixing and fastening hardware, heavy duty ironmongery, accessories, including finish, soft close, painting and all other related auxiliaries works as required by engineer - 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. - (No patching is allowed for existing wooden works) ***Rate or Lump Sum in Words:***	m^2			
	WOOD AND PLASTICS **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
7	**THERMAL AND MOISTURE PROTECTION**				
7.0	**Preliminaries**				
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 ***Rate or Lump Sum in Words:***	LS			
7.1 7.1.1	**Roof Waterproofing** 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 & debris - 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/m³ where required - Provide Geotextile layers - Provide all aluminum flashing with mastic - Provide finishing material as required - All as specified and approved shop drawings ***Rate or Lump Sum in Words:***	m²			
	THERMAL AND MOISTURE PROTECTION **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8	**DOOR AND WINDOWS**				
8.1	**Wooden Doors and Windows** 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	**Timber Doors** 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				
8.1.1.2	Provide new single leaf wooden door with view frame ***Rate or Lump Sum in Words:***	№			
8.1.1.5	Provide new toilet doors with related accessories as per specifications ***Rate or Lump Sum in Words:***	№	4		



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.1.3	**Rehabilitate the Existing Timber Doors** 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.				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.1.3.1.1	Rehabilitate and paint existing single leaf timber doors with related accessories ***Rate or Lump Sum in Words:***	№			
8.1.3.1.5a New Item	Supply and install wooden doors accessories (Handle - Lock - Etc…) ***Rate or Lump Sum in Words:***	№	8		
8.1.3.1.6a New Item	Replace broken glass of the wooden door view access window ***Rate or Lump Sum in Words:***	№			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.2	**Aluminum Doors and Windows** 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	**New Aluminum Panels (Double Glass)** Supply and install the fabricated aluminum panels with double glass (6 - 12 - 6 mm) (Outer Glass should be Tempered)				
8.2.1.1	Provide new aluminum double glazed window & door panel ***Rate or Lump Sum in Words:***	№			
8.2.1.4	Replace existing elements by new single glazed aluminum windows (6mm) if the quantity of broken glass does not exceed 30% of whole building ***Rate or Lump Sum in Words:***	№	2		
8.2.2	**New Aluminum Internal Door** 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. ***Rate or Lump Sum in Words:***	№			
8.2.2.2	Provide new single glazed aluminum partition double leaf door ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
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 ***Rate or Lump Sum in Words:***	№			
8.2.3.1a New Item	Rehabilitate existing Doors ***Rate or Lump Sum in Words:***	№			
8.2.3.2a New Item	Rehabilitate existing aluminum Doors / Windows with all related accessories without Glass ***Rate or Lump Sum in Words:***	№			
	DOOR AND WINDOWS **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9	**FINISHES**				
9.1	**Cement Plaster** 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 9.1.1.1	**Internal and External Plaster Works** 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. ***Rate or Lump Sum in Words:***	m^2			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.1.2	**Repair of Existing Plaster (Internal - External) (Cracks, etc.)**				
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. Fill 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			



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2	**Tiling Works (Similar to existing)** 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				
9.2.2 9.2.2.1	**New Glazed Colored Ceramic for Walls** Supply and install glazed colored ceramic for walls Include Ceramic Corner (first choice) ***Rate or Lump Sum in Words:***	m²			
9.2.4 9.2.4.1	**Repair existing broken floor tiles and skirting (all types) and reinstall by new, similar to existing for all rooms and corridors** 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. ***Rate or Lump Sum in Words:***	LS			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2.4a New Item	**Repair existing broken tiles (all types) and reinstall by new, similar to existing for toilets, drinking Basin and kitchen**				
9.2.4.1a New Item	Rehabilitate and repair all damaged and broken tiles, 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. ***Rate or Lump Sum in Words:***	m²			
9.2.7	**Clean and Rub the Existing Floor Tiles and Skirting** 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				
9.2.7.2	Type 2: Ceramic ***Rate or Lump Sum in Words:***	m²			
9.2.7.3	Type 3: Mosaic ***Rate or Lump Sum in Words:***	m²			
9.2.7.5	Type 5: Skirting (any type and size) ***Rate or Lump Sum in Words:***	m			
9.2.7.8a New Item	Type 8: Terrazzo ***Rate or Lump Sum in Words:***	m²			
9.2.7.10a New Item	Type 10: Dismantling of the existing Faux parquet, Rehabilitate, Clean and Rub the Existing any type of flooring tiles and skirting ***Rate or Lump Sum in Words:***	m²			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2.8	**<u>Clean the Existing Decorative Wall Tiles</u>** Rehabilitate any type of decorative wall tiles (mosaic - marble - etc.) Work to include: - All materials and labors - Grouting - Polish and rubbing - All needed items as per the Engineer instruction. - Works to be executed by experts				
9.2.8.4	Type 4: Terrazzo ***Rate or Lump Sum in Words:***	m²	60		
9.2.9	**<u>Colored PVC for Covered Indoor KG Playgrounds</u>** Supply and install first class safe and antibacterial colored P.V.C. flooring for indoor KG playgrounds at least 6mm thick (Design shape and colors of vinyl flooring should be approved by engineer prior to installation) Work to include: - Shop drawing for design, shape and colors of vinyl flooring should be submitted for each classroom separately for engineer approval - Laminate existing finish flooring after removing vinyl by special concrete material level - Make good and smooth the flooring - Apply self leveling special materials(if needed) to assume Vinyl best finishing - Remove all the existing skirting - Treat the place of the existing skirting - Place the special glue as specified - Place the flooring and screw the skirting P.V.C. profile Labors and materials, screw, etc. All needed items as per the Engineer instructions and approval. <u>Note</u>: Work should be executed by experts and should be executed in presence and approval of supervision engineer and as per required specifications for materials and executions. ***Rate or Lump Sum in Words:***	m²	315		

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.3	**Suspended Ceilings (Similar to existing)** 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 specifications - 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	**Metal Sheet Strips Suspended Ceilings:**				
9.3.1.2	60 x 60 cm Aluminum Suspended Ceiling ***Rate or Lump Sum in Words:***	m²			
9.4	**Gypsum Works (Similar to existing)**				
9.4.2	**Rehabilitate Existing Gypsum Suspended Ceiling (Tiles, Panels)**				
9.4.2.1	Rehabilitate existing gypsum board suspended ceiling n the case of damage or during construction. Works to include material, labor, equipment, etc. and to the engineer's approval ***Rate or Lump Sum in Words:***	m²	25		

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.5	**Painting**				
9.5.1	**Wall and Ceilings Paint Works** 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, ***All paint types must be lead-free and Low VOC (Volatile Organic Compounds)***				
9.5.1.1	Super Rubber Paint for new walls and ceilings ***Rate or Lump Sum in Words:***	m²			
9.5.1.2	Super Rubber Paint for old walls and ceilings ***Rate or Lump Sum in Words:***	m²			
9.5.1.3	Oil Paint for new walls and ceilings ***Rate or Lump Sum in Words:***	m²			
9.5.1.4	Oil Paints for old walls and ceilings ***Rate or Lump Sum in Words:***	m²			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.5.2	**Outside Walls Paint (Old and New Walls and Ceilings)**				
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. ***Rate or Lump Sum in Words:***	m^2			
9.5.6	**Epoxy coating (Playground -covered indoor Car Parking)**				
9.5.6.5a New Item	For Roof ***Rate or Lump Sum in Words:***	m^2			
	FINISHES **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10	**SPECIALTIES**				
10.1	**Bathrooms Accessories** - 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				
10.1.1 10.1.1.1	**Paper Roller Holder** Supply and install paper holder no rust, no stain stainless steel 316 with all accessories and fixation (anti-rust materials) for good quality and at the places shown on drawings All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	№ 			
10.1.2 10.1.2.1	**Soap Dispenser** Supply and install stainless steel 316 no rust, no stain, soap dispenser wall type fixation (anti-rust materials and accessories) with all needed items All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	 № 			
10.1.3 10.1.3.1	**Paper Holder Box** Supply and install paper holder box from stainless steel 316 no rust, no stain, with all needed works and fixation (anti-rust materials and accessories) The box should be from a good manufacturer All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	 № 			
10.1.4	**Mirror for Lavatories** 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 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) ***Rate or Lump Sum in Words:***	 № 			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10.1.5	**<u>Handicapped Bathroom Accessories</u>** - Remove and cart away old damaged fixtures Supply and install all needed bars for the handicapped toilet of stainless steel 316 Work to include: - Materials - Labors - and all needed items as per the Engineer instructions				
10.1.5.1	Supply and install vertical grab rail 60cm bars ***Rate or Lump Sum in Words:***	№			
10.1.5.2	Supply and install Horizontal grab rail 60cm bars ***Rate or Lump Sum in Words:***	№			
10.1.5.3	Supply and install Drop Down Rail removable arm 80cm ***Rate or Lump Sum in Words:***	№			
10.1.5.4	Alarm pull cord for emergency ***Rate or Lump Sum in Words:***	№			
10.1.5.5a New Item	Supply and install partition between urinals similar to existing with all needed fixation accessories ***Rate or Lump Sum in Words:***	№			
10.2	**Classroom Specialties**				
10.2.1 10.2.1.1	**<u>White Teaching Boards</u>** Supply and install White teaching boards from approved manufacturer as per specifications of Ministry of Education and Higher Education and corresponding to the site Cost to include: - (3600mm x 1200mm) final dimensions as per site limitation - Materials and labors - Felt marker pens and eraser (12 marker pens + 2 erases for each white board) - Stainless Steel screws - Remove the existing board - All needed works as per the Engineer instructions ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10.3	**Resin Work**				
10.3.1	**Drinking Basin** 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) ***Rate or Lump Sum in Words:***	№			
10.3.1.7a New Item	Rehabilitation of existing Drinking Basin - Any Length (Traps, Taps, Cleaning and repair of any damaged elements) ***Rate or Lump Sum in Words:***	№			
10.3.4	**Kitchen Counter** 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				
10.3.4.3	Kitchen Counter - Length (1.76 to 2.05 m) ***Rate or Lump Sum in Words:***	№			
10.5	**Internal Curtains** Supply and install internal rolling type tissue and polyester collapsible type curtain as per specifications and at the location as shown on drawings Works to include: - Materials - Labors - Heavy Duty Accessories - All needed works as per the Engineer instructions and approval				
10.5.1	On External Opening ***Rate or Lump Sum in Words:***	m²	35		
	SPECIALTIES **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
11	**EQUIPMENT**				
	EQUIPMENT **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
12	**FURNISHINGS**				
12.1	**INSTITUTIONAL FURNITURE** Supply and install the following institutional furniture complete including all necessary fixing and accessories, all as specified, shown on the drawings and to the satisfaction of the Engineer.				
12.1.1	**Classrooms Furniture**				
12.1.1.1	Standard desk with chair for classroom, single seat. ***Rate or Lump Sum in Words:***	№			
12.1.2	**Conference Room Furniture**				
12.1.2.1	Standard table. ***Rate or Lump Sum in Words:***	№			
12.1.2.2	Standard chairs. ***Rate or Lump Sum in Words:***	№			
12.1.6 12.1.6.1	**Hooks with Rails for Hats and Coats** Hooks with rails for hats and coats, rail size 120mm high x 20mm thick, softwood, treated and painted, countersunk screwed to wall & painted steel hooks every 200 mm (5№ hooks per linear meter of rail). ***Rate or Lump Sum in Words:***	lm			
	FURNISHINGS **TOTAL CARRIED TO COLLECTION**				

Collection

Page №		Amount (US $)
2.1	SITE PREPARATION AND DEMOLITION	.....
2.2	EXTERNAL WORKS	.....
2.3	CONCRETE	.....
2.4	MASONRY	.....
2.5	METAL WORKS	.....
2.6	WOOD AND PLASTICS	.....
2.7	THERMAL AND MOISTURE PROTECTION	.....
2.8	DOOR AND WINDOWS	.....
2.9	FINISHES	.....
2.10	SPECIALTIES	.....
2.11	EQUIPMENT	.....
2.12	FURNISHINGS	.....
	Total Carried to General Summary	.....



Bill № 3: Mechanical Engineering Services



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**GENERAL TECHNICAL REQUIREMENTS**				
1.1	**General Mechanical Requirements**				
1.1.1	Revise all Mechanical drawings and make sure that they can be executed properly. ***Rate or Lump Sum in Words:***	Item			
1.2	**Rehabilitation Works General Requirements** 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, floor drains, roof drains, manholes, pumps, WC tanks, adding where applicable all necessary valves, flush valves, etc., and all other necessary works. ***Rate or Lump Sum in Words:***	Item	1		
1.2.2	Maintenance and rehabilitation of existing HVAC & fire fighting systems, including all necessary piping, duct works, pumps and controls, fans, mechanical works inside shafts, air conditioning units, etc. ***Rate or Lump Sum in Words:***	Item			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1.2.3a New Item	Contractor Shall remove existing, newly added showers. Works to include - Removal of fixtures (Shower head or hand) - Replacement of damaged tiles by new one similar to existing. All other nessessary works (Finishes and mechanical works) ***Rate or Lump Sum in Words:***	№	1		
1.2.4a New Item	Contractor Shall remove existing, newly added Water Heater . Works to include - Removal of all pipes and accessories - Replacement of damaged tiles by new one similar to existing. All other nessessary works (Finishes and mechanical works) ***Rate or Lump Sum in Words:***	№			
	GENERAL TECHNICAL REQUIREMENTS **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION**				
2.3	**Drain Cover** Supply and install floor drain cover (P.E) 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 Engineer instructions				
2.3.1	Cover for FCO ***Rate or Lump Sum in Words:***	№			
	SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**WATER PIPE WORK INSTALLATION**				
3.2	**Electrical Water Heater** Electrical water heater as specified and scheduled; include pipe work connections, temperature and pressure gauges, control and power wiring from the MCC, hot water and pipe work connections, control and high limit control valves, isolation and safety valves, thermal insulation, valve boxes, bonding and identification, and the heater should be of a good trade mark of European or west made or first class Lebanese product.				
3.2.2	EWH-02 (100 L) ***Rate or Lump Sum in Words:***	№			
	WATER PIPE WORK INSTALLATION TOTAL CARRIED TO COLLECTION				
4	**FIRE PROTECTION**				
	FIRE PROTECTION TOTAL CARRIED TO COLLECTION				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**SANITARY FIXTURES**				
5.2	**W.C. For Non Kids** 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 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)				
5.2.1	EWC-01 (Wall Hang - 52 x 36 cm) ***Rate or Lump Sum in Words:***	№			
5.2.3a New Item	EWC Accessories (Seat Cover - Flush Tank Cover / Push Button Etc…) ***Rate or Lump Sum in Words:***	№	2		
5.4	**Lavatories for Non Kids** Supply and install semi pedestal wash basin similar to Ideal Standard No. 742001 or approved equal 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) ***Rate or Lump Sum in Words:***	№			
5.4.2	LAV-02 (wall hang, handicapped with mixers 56 x 41 cm) ***Rate or Lump Sum in Words:***	№			
5.4.3a	LAV accessories (Traps - Mixers - Fixation, Etc…) ***Rate or Lump Sum in Words:***	№	2		

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5.5	**Urinal** Supply and installation of high quality urinal units complete with proper wall fixation with anti-dust materials including drainage & water supply connection as per the approved shop drawings. Cost to include all necessary accessories, valves, sensors to provide workable system.				
5.5.1	Urinal ***Rate or Lump Sum in Words:***	№			
5.6	**Self Close Taps on Kids & Students Lavatories** Supply and install self close taps to be fixed in the lavatory body as manufactured by Grohe Item No. 36-173 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 ***Rate or Lump Sum in Words:***	№			
5.7	**Wall Type Self Close Taps on Drinking Basins** Supply and install self close taps to be fixed in the drinking basin body as manufactured by Grohe Item No. 36-176 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 ***Rate or Lump Sum in Words:***	№			
5.8	**Kitchen Sink Accessories** Supply and install kitchen sink accessories such as chrome trap, angle valve, mixers as specified				
5.8.1	Kitchen Sink Accessories ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5.10	**Lavatories Resin Accessories** Supply and install lavatories resin accessories such as chrome trap, angle valves as specified				
5.10.1	Lavatories Resin Accessories ***Rate or Lump Sum in Words:***	№			
5.14	**Hose Bib** Supply and install Hose Bib taps including water connection & all necessary accessories as required				
5.14.1	HB - 01 ***Rate or Lump Sum in Words:***	№	12		
5.14.2a New Item	Maintenace of Potable Water System Contractor shall ensure proper functionality of the system ***Rate or Lump Sum in Words:***	Item			
5.14.3a New Item	Rehabilitation of existing septic tank, including cleaning, crack and joint sealing, waterproofing, replacement of damaged fittings, and all necessary works to restore watertightness and proper operation ***Rate or Lump Sum in Words:***	Item			
	SANITARY FIXTURES **TOTAL CARRIED TO COLLECTION**				

Collection

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	Total Carried to General Summary	.....

A CHEHAB ARCHITECTS & ENGINEERS
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Bill № 4: Electrical Engineering Services



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**BASIC ELECTRICAL REQUIREMENTS** 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	**Fixing and Repairing** 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 ***Rate or Lump Sum in Words:***	LS	1		
1.1.2	Wires and cables ***Rate or Lump Sum in Words:***	LS			
1.1.3	Sockets and switches ***Rate or Lump Sum in Words:***	LS	1		
1.1.4	Circuit breakers ***Rate or Lump Sum in Words:***	LS			
1.1.5	Disconnecting switches ***Rate or Lump Sum in Words:***	LS			
	BASIC ELECTRICAL REQUIREMENTS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**PANELBOARDS**				
2.2	**Computer Lab Panel Board (Rehabilitation)**				
2.2.1	Rehabilitate and install the Computer Lab Panel Board, works to include: - Rehabilitation and connection - Wires installation - Accessories - All Accessories Failed Complete to shop drawings and to the satisfaction of the engineer (ready to use) ***Rate or Lump Sum in Words:***	№			
2.3a New Item	Supply and Install New Panel Board Cover ***Rate or Lump Sum in Words:***	№			
	PANELBOARDS **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**GENERAL LIGHTING INSTALLATIONS**				
3.1	**Lighting Fixtures** 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 φ ≥ 0.9 ***Rate or Lump Sum in Words:***	№			
3.1.2	Replace existing lighting fixtures with C1 ***Rate or Lump Sum in Words:***	№			
3.1.3	TYPE C2: as same as TYPE C1 but Pendent mounted ***Rate or Lump Sum in Words:***	№			
3.1.4	TYPE A2 / A3: 600x600 mm LED Panel 3600lm, 33W, 4000K, 80CRI surface-mount/recessed, die-cast aluminum, IP20 ***Rate or Lump Sum in Words:***	№			
3.1.5	TYPE A1: as same as TYPE A2 but Pendent mounted ***Rate or Lump Sum in Words:***	№			
3.1.6	TYPE N4 / N3: LED - 900lm - 12.5W - 3000K - 80CRI - WW Surface mounted / Recessed Downlight Round - 120 deg ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3.1.7	TYPE F: PLAFONIERA OVAL Wall mounted - IP54 Aluminum die-cast housing IK 06 - CLASS I Lamp SHOULD BE LED 900Lm, 4000K, 17W. ***Rate or Lump Sum in Words:***	№			
3.1.8	TYPE W: A++ / COB LED 3000K 230V CRI 90 - 3955lm - 42W IP65 - IK07 - Die-cast EN AB-47100 aluminum housing with high corrosion resistance. ***Rate or Lump Sum in Words:***	№			
3.1.9	TYPE L (LED): OVAL 18W 516Lm IP54 IK06 FOR LIFT & TECHNICAL SHAFTS. Wall mounted luminaire Aluminum die cast housing in EN AB-47100 (low copper content) with high resistance against corrosion. IK 06 Sand blasted glass diffuser. Lamp fixed position. LOR 43% Isolation: CLASS I. Black (cod.09). Lamp not included. ***Rate or Lump Sum in Words:***	№			
3.1.10	Replace Existing lighting fixtures with TYPE L (LED) ***Rate or Lump Sum in Words:***	№			
3.1.11	TYPE M: LED - 1500lm - 17W - 4000K - 80CRI - Ceiling mounted - With Motion Sensor. ***Rate or Lump Sum in Words:***	№			
3.1.12	Replace Existing lighting fixtures with TYPE M ***Rate or Lump Sum in Words:***	№			
3.1.13	TYPE EM: Ceiling Emergency Ceiling mounted non-maintained 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65. ***Rate or Lump Sum in Words:***	№			



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3.1.14	Replace Existing EM with LED Emergency ***Rate or Lump Sum in Words:***	№			
3.1.15	TYPE EM: Wall Emergency Wall mounted non-maintained, 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65. ***Rate or Lump Sum in Words:***	№			
3.1.16	TYPE EX: Exit sign LED light wall/ceiling mounted maintained, 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65 with engraved letters on fixtures ***Rate or Lump Sum in Words:***	№			
3.1.17	Replace Existing Exit with LED Exits ***Rate or Lump Sum in Words:***	№			
3.1.18	TYPE H: High Bay LED Lightning fixture pendent 100W, 220V, 50Hz. ***Rate or Lump Sum in Words:***	№			
	GENERAL LIGHTING INSTALLATIONS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
4	**FIRE ALARM SYSTEM**				
	FIRE ALARM SYSTEM TOTAL CARRIED TO COLLECTION				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**DATA SYSTEM**				
	DATA SYSTEM **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
6	**UNINTERRUPTIBLE POWER SUPPLY (UPS)**				
	UNINTERRUPTIBLE POWER SUPPLY (UPS) TOTAL CARRIED TO COLLECTION				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
7	**CCTV SYSTEM** Supply, install, connect and test CCTV system complete with conduits installations from the location of the NVR through the different CCTV camera outlets, including the pull or draw boxes and derivation boxes, the junction and outlet boxes, 19" Rack, and all necessary connections to the management station as shown on drawings as per Tender Specifications and the like to the satisfaction of the supervision engineer.				
7.3a New Item	Replace existing Cameras by new one Similar to existing ***Rate or Lump Sum in Words:***	№			
	CCTV SYSTEM **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8	**SOLAR SYSTEM**				
8.1	Supply, install, connect and test the solar lighting system for all Electrical Loads (excluding Lifts, Pumps and AC Units) in perfect operating conditions, including but not limited to: - Photovoltaic multi-crystalline solar panels as shown on the drawings. - Hybrid Inverter - All cables, wires, conduits and all necessary accessories - Aluminum PV mountings - The Contractor shall ensure complete solar system which should function as the main Power Supply - The Contractor should submit detailed shop drawings and materials for approval. - For all blocks of the schools - Lithium Batteries for (Off-Grid Solar Types) - All necessary elevated structures on roof and other areas which are needed to install the required solar panel as mentioned on drawings (Sheds, Parking, etc.) areas ***Rate or Lump Sum in Words:***	LS			
8.1.2a	Replace Unfuctional Battery by new one similar to existing				
8.1.2.1a	Deye BOS-G 51.2 kWh High-Voltage $LiFePO_4$ Battery Energy Storage System – Complete Supply, Installation, Testing & Commissioning ***Rate or Lump Sum in Words:***	№			
8.1.2.1b	Deye BOS-GM5.1 HV $LiFePO_4$ Battery, 51.2 V, 100 Ah, 5.12 kWh, including installation, testing and commissioning ***Rate or Lump Sum in Words:***	№			
8.1.2.1c	Acid Battery, 12 V, 250 Ah ***Rate or Lump Sum in Words:***	№			
	SOLAR SYSTEM **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9	**BELL SYSTEM**				
	BELL SYSTEM **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10	**LIFTS REHABILITATION**				
10.1	Rehabilitation of the 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: 650kg Speed: 1.5mps Entrance size/ type: 1100 mm wide single speed center opening ***Rate or Lump Sum in Words:***	№			
	LIFTS REHABILITATION **TOTAL CARRIED TO COLLECTION**				

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Collection

Page №		Amount (US $)
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General Summary
798-Hosh El Oumara Intermediate Public School



General Summary

Description	Amount (US $)
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* Discount by Tenderer (_____ %) ……	
* Total Amount of Tender (VAT Not Applicable) ……	

* Total Amount of Tender in Words:

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General Summary

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Bill № 2: Civil and Architectural Works



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**SITE PREPARATION AND DEMOLITION**				
1.1	**Demolishing and Removal of Debris**				
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. ***Rate or Lump Sum in Words:***	LS	1		
1.1a New Item	**Dismantling** The works include the dismantling works related to the newly installed water tanks and prefabricated units. - The contractor shall deliver the dismantled items to the Building administration / MEHE. ***Rate or Lump Sum in Words:***				
1.1.1.a New Item	Water Tanks ***Rate or Lump Sum in Words:***	№			
1.1.1.b New Item	Prefabricated Units ***Rate or Lump Sum in Words:***	№			
1.1.1.c New Item	Partitions of any type ***Rate or Lump Sum in Words:***	m2			
	SITE PREPARATION AND DEMOLITION **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**EXTERNAL WORKS**				
2.4 2.4.2	**School Fences with Related Gates** Rehabilitate Existing Fence (Strengthening & Rehabilitation) Work to include - Rehabilitate and support all the existing fence as per drawings - Determine the places that requires support - Preparation of shop drawings - Replace all broken elements - Redo all damaged elements and to be similar to existing elements - Finishing works as existing (plastering, paints, stone cladding, etc.) - Rehabilitate existing steel protection (Replace all damaged part by new similar to existing and paint with epoxy as specified) - Replace existing chain link by new one (Galvanized) - Reconstruct the broken and damaged parts and rehabilitate as it was with all similar materials including steel parts with related epoxy paint as per the engineer instructions ***Rate or Lump Sum in Words:***	m			
2.5 2.5.1	**Ramp for External Existing Sidewalk** 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 ***Rate or Lump Sum in Words:***	LS			
	EXTERNAL WORKS **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**CONCRETE** **Not Applicable**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
4	**MASONRY**				
	SITE PREPARATION AND DEMOLITION TOTAL CARRIED TO COLLECTION				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**METAL WORKS**				
5.1	**Provide New Steel Work (Door & Windows)**				
5.1.3	Provide new double glazed aluminum windows with new burglar proof protection ***Rate or Lump Sum in Words:***	№			
5.2	**Rehabilitate and Maintain the Existing Steel Work (Burglar Proof Protection + Opening)** 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 ***Rate or Lump Sum in Words:***	№			
5.2.7b New Item	Rehabilitate existing steel doors work to include all door accessories such as lock, handle and all necessary accessories. ***Rate or Lump Sum in Words:***	№			
5.5a **New Item**	**Steel Handrail** - Provide new metal handrail similar to exist with all all necessary accessories - Apply one layer of epoxy base paint - Apply putty - Apply epoxy paint as per specification All needed items as per the Engineer instructions				
5.5.1a New Item	Above Parapet ***Rate or Lump Sum in Words:***	m			
	METAL WORKS **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
6	**WOOD AND PLASTICS**				
6.1	**Joinery Works**				
6.1.1	**Rehabilitate Existing Kitchen Cupboards** 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 ***Rate or Lump Sum in Words:***	m			
6.1.2	**Rehabilitate Timber Cupboard** Rehabilitate timber cupboards with plastic laminate color, work to include sub framing, drawer units, shelves, fixing and fastening hardware, heavy duty ironmongery, accessories, including finish, soft close, painting and all other related auxiliaries works as required by engineer - 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. - (No patching is allowed for existing wooden works) ***Rate or Lump Sum in Words:***	m^2			
	WOOD AND PLASTICS **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
7	**THERMAL AND MOISTURE PROTECTION**				
7.0	**Preliminaries**				
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 ***Rate or Lump Sum in Words:***	LS			
7.1 7.1.1	**Roof Waterproofing** 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 & debris - 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/m³ where required - Provide Geotextile layers - Provide all aluminum flashing with mastic - Provide finishing material as required - All as specified and approved shop drawings ***Rate or Lump Sum in Words:***	m²			
	THERMAL AND MOISTURE PROTECTION **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8	**DOOR AND WINDOWS**				
8.1	**Wooden Doors and Windows** 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	**Timber Doors** 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				
8.1.1.2	Provide new single leaf wooden door with view frame ***Rate or Lump Sum in Words:***	№			
8.1.1.5	Provide new toilet doors with related accessories as per specifications ***Rate or Lump Sum in Words:***	№			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.1.3	**Rehabilitate the Existing Timber Doors** 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.				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.1.3.1.1	Rehabilitate and paint existing single leaf timber doors with related accessories ***Rate or Lump Sum in Words:***	№			
8.1.3.1.5a New Item	Supply and install wooden doors accessories (Handle - Lock - Etc…) ***Rate or Lump Sum in Words:***	№	15		
8.1.3.1.6a New Item	Replace broken glass of the wooden door view access window ***Rate or Lump Sum in Words:***	№			



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
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)				
8.2.1.1	Provide new aluminum double glazed window & door panel ***Rate or Lump Sum in Words:***	№			
8.2.1.4	Replace existing elements by new single glazed aluminum windows (6mm) if the quantity of broken glass does not exceed 30% of whole building ***Rate or Lump Sum in Words:***	№			
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. ***Rate or Lump Sum in Words:***	№			
8.2.2.2	Provide new single glazed aluminum partition double leaf door ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
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 ***Rate or Lump Sum in Words:***	№			
8.2.3.1a New Item	Rehabilitate existing Doors ***Rate or Lump Sum in Words:***	№			
8.2.3.2a New Item	Rehabilitate existing aluminum Doors / Windows with all related accessories without Glass ***Rate or Lump Sum in Words:***	№			
	DOOR AND WINDOWS **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9	**FINISHES**				
9.1	**Cement Plaster** 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 9.1.1.1	**Internal and External Plaster Works** 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. ***Rate or Lump Sum in Words:***	m^2			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.1.2	**Repair of Existing Plaster (Internal - External) (Cracks, etc.)**				
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. Fill 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			



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2	**Tiling Works (Similar to existing)** 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				
9.2.2 9.2.2.1	**New Glazed Colored Ceramic for Walls** Supply and install glazed colored ceramic for walls Include Ceramic Corner (first choice) ***Rate or Lump Sum in Words:***	m^2			
9.2.4 9.2.4.1	**Repair existing broken floor tiles and skirting (all types) and reinstall by new, similar to existing for all rooms and corridors** 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. ***Rate or Lump Sum in Words:***	LS			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2.4a New Item	**<u>Repair existing broken tiles (all types) and reinstall by new, similar to existing for toilets, drinking Basin and kitchen</u>**				
9.2.4.1a New Item	Rehabilitate and repair all damaged and broken tiles, 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. ***Rate or Lump Sum in Words:***	m^2			
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				
9.2.7.2	Type 2: Ceramic ***Rate or Lump Sum in Words:***	m^2			
9.2.7.3	Type 3: Mosaic ***Rate or Lump Sum in Words:***	m^2			
9.2.7.5	Type 5: Skirting (any type and size) ***Rate or Lump Sum in Words:***	m			
9.2.7.8a New Item	Type 8: Terrazzo ***Rate or Lump Sum in Words:***	m^2			
9.2.7.10a New Item	Type 10: Dismantling of the existing Faux parquet, Rehabilitate, Clean and Rub the Existing any type of flooring tiles and skirting ***Rate or Lump Sum in Words:***	m^2			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2.8	**<u>Clean the Existing Decorative Wall Tiles</u>** Rehabilitate any type of decorative wall tiles (mosaic - marble - etc.) Work to include: - All materials and labors - Grouting - Polish and rubbing - All needed items as per the Engineer instruction. - Works to be executed by experts				
9.2.8.4	Type 4: Terrazzo ***Rate or Lump Sum in Words:***	m²			
9.2.9	**<u>Colored PVC for Covered Indoor KG Playgrounds</u>** Supply and install first class safe and antibacterial colored P.V.C. flooring for indoor KG playgrounds at least 6mm thick (Design shape and colors of vinyl flooring should be approved by engineer prior to installation) Work to include: - Shop drawing for design, shape and colors of vinyl flooring should be submitted for each classroom separately for engineer approval - Laminate existing finish flooring after removing vinyl by special concrete material level - Make good and smooth the flooring - Apply self leveling special materials(if needed) to assume Vinyl best finishing - Remove all the existing skirting - Treat the place of the existing skirting - Place the special glue as specified - Place the flooring and screw the skirting P.V.C. profile Labors and materials, screw, etc. All needed items as per the Engineer instructions and approval. <u>Note</u>: Work should be executed by experts and should be executed in presence and approval of supervision engineer and as per required specifications for materials and executions. ***Rate or Lump Sum in Words:***	m²			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.3	**Suspended Ceilings (Similar to existing)** 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 specifications - 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	**Metal Sheet Strips Suspended Ceilings:**				
9.3.1.2	60 x 60 cm Aluminum Suspended Ceiling ***Rate or Lump Sum in Words:***	m^2			
9.4	**Gypsum Works (Similar to existing)**				
9.4.2	**Rehabilitate Existing Gypsum Suspended Ceiling (Tiles, Panels)**				
9.4.2.1	Rehabilitate existing gypsum board suspended ceiling n the case of damage or during construction. Works to include material, labor, equipment, etc. and to the engineer's approval ***Rate or Lump Sum in Words:***	m^2			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.5	**Painting**				
9.5.1	**Wall and Ceilings Paint Works** 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, ***All paint types must be lead-free and Low VOC (Volatile Organic Compounds)***				
9.5.1.1	Super Rubber Paint for new walls and ceilings ***Rate or Lump Sum in Words:***	m^2			
9.5.1.2	Super Rubber Paint for old walls and ceilings ***Rate or Lump Sum in Words:***	m^2	450		
9.5.1.3	Oil Paint for new walls and ceilings ***Rate or Lump Sum in Words:***	m^2			
9.5.1.4	Oil Paints for old walls and ceilings ***Rate or Lump Sum in Words:***	m^2	1,350		

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.5.2 9.5.2.1	**<u>Outside Walls Paint (Old and New Walls and Ceilings)</u>** 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. ***Rate or Lump Sum in Words:***	m^2			
9.5.6	**<u>Epoxy coating (Playground -covered indoor Car Parking)</u>**				
9.5.6.5a New Item	For Roof ***Rate or Lump Sum in Words:***	m^2			
	FINISHES **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10	**SPECIALTIES**				
10.1	**Bathrooms Accessories** - 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				
10.1.1 10.1.1.1	**Paper Roller Holder** Supply and install paper holder no rust, no stain stainless steel 316 with all accessories and fixation (anti-rust materials) for good quality and at the places shown on drawings All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	№ 			
10.1.2 10.1.2.1	**Soap Dispenser** Supply and install stainless steel 316 no rust, no stain, soap dispenser wall type fixation (anti-rust materials and accessories) with all needed items All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	 № 			
10.1.3 10.1.3.1	**Paper Holder Box** Supply and install paper holder box from stainless steel 316 no rust, no stain, with all needed works and fixation (anti-rust materials and accessories) The box should be from a good manufacturer All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	 № 			
10.1.4	**Mirror for Lavatories** 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 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) ***Rate or Lump Sum in Words:***	№ 			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10.1.5	**<u>Handicapped Bathroom Accessories</u>** - Remove and cart away old damaged fixtures Supply and install all needed bars for the handicapped toilet of stainless steel 316 Work to include: - Materials - Labors - and all needed items as per the Engineer instructions				
10.1.5.1	Supply and install vertical grab rail 60cm bars ***Rate or Lump Sum in Words:***	№			
10.1.5.2	Supply and install Horizontal grab rail 60cm bars ***Rate or Lump Sum in Words:***	№			
10.1.5.3	Supply and install Drop Down Rail removable arm 80cm ***Rate or Lump Sum in Words:***	№			
10.1.5.4	Alarm pull cord for emergency ***Rate or Lump Sum in Words:***	№			
10.1.5.5a New Item	Supply and install partition between urinals similar to existing with all needed fixation accessories ***Rate or Lump Sum in Words:***	№			
10.2	**Classroom Specialties**				
10.2.1 10.2.1.1	**<u>White Teaching Boards</u>** Supply and install White teaching boards from approved manufacturer as per specifications of Ministry of Education and Higher Education and corresponding to the site Cost to include: - (3600mm x 1200mm) final dimensions as per site limitation - Materials and labors - Felt marker pens and eraser (12 marker pens + 2 erases for each white board) - Stainless Steel screws - Remove the existing board - All needed works as per the Engineer instructions ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10.3	**Resin Work**				
10.3.1	**Drinking Basin** 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) ***Rate or Lump Sum in Words:***	№			
10.3.1.7a New Item	Rehabilitation of existing Drinking Basin - Any Length (Traps, Taps, Cleaning and repair of any damaged elements) ***Rate or Lump Sum in Words:***	№	1		
10.3.4	**Kitchen Counter** 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				
10.3.4.3	Kitchen Counter - Length (1.76 to 2.05 m) ***Rate or Lump Sum in Words:***	№			
10.5	**Internal Curtains** Supply and install internal rolling type tissue and polyester collapsible type curtain as per specifications and at the location as shown on drawings Works to include: - Materials - Labors - Heavy Duty Accessories - All needed works as per the Engineer instructions and approval				
10.5.1	On External Opening ***Rate or Lump Sum in Words:***	m^2			
	SPECIALTIES **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
11	**EQUIPMENT**				
	EQUIPMENT **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
12	**FURNISHINGS**				
12.1	**INSTITUTIONAL FURNITURE** Supply and install the following institutional furniture complete including all necessary fixing and accessories, all as specified, shown on the drawings and to the satisfaction of the Engineer.				
12.1.1	**Classrooms Furniture**				
12.1.1.1	Standard desk with chair for classroom, single seat. ***Rate or Lump Sum in Words:***	№			
12.1.2	**Conference Room Furniture**				
12.1.2.1	Standard table. ***Rate or Lump Sum in Words:***	№			
12.1.2.2	Standard chairs. ***Rate or Lump Sum in Words:***	№			
12.1.6 12.1.6.1	**Hooks with Rails for Hats and Coats** Hooks with rails for hats and coats, rail size 120mm high x 20mm thick, softwood, treated and painted, countersunk screwed to wall & painted steel hooks every 200 mm (5№ hooks per linear meter of rail). ***Rate or Lump Sum in Words:***	lm			
	FURNISHINGS **TOTAL CARRIED TO COLLECTION**				

Collection

Page №		Amount (US $)
2.1	SITE PREPARATION AND DEMOLITION	.....
2.2	EXTERNAL WORKS	.....
2.3	CONCRETE	.....
2.4	MASONRY	.....
2.5	METAL WORKS	.....
2.6	WOOD AND PLASTICS	.....
2.7	THERMAL AND MOISTURE PROTECTION	.....
2.8	DOOR AND WINDOWS	.....
2.9	FINISHES	.....
2.10	SPECIALTIES	.....
2.11	EQUIPMENT	.....
2.12	FURNISHINGS	.....
	Total Carried to General Summary	.....

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Bill № 3: Mechanical Engineering Services



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**GENERAL TECHNICAL REQUIREMENTS**				
1.1	**General Mechanical Requirements**				
1.1.1	Revise all Mechanical drawings and make sure that they can be executed properly. ***Rate or Lump Sum in Words:***	Item			
1.2	**Rehabilitation Works General Requirements** 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, floor drains, roof drains, manholes, pumps, WC tanks, adding where applicable all necessary valves, flush valves, etc., and all other necessary works. ***Rate or Lump Sum in Words:***	Item	1		
1.2.2	Maintenance and rehabilitation of existing HVAC & fire fighting systems, including all necessary piping, duct works, pumps and controls, fans, mechanical works inside shafts, air conditioning units, etc. ***Rate or Lump Sum in Words:***	Item			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1.2.3a New Item	Contractor Shall remove existing, newly added showers. Works to include - Removal of fixtures (Shower head or hand) - Replacement of damaged tiles by new one similar to existing. All other nessessary works (Finishes and mechanical works) ***Rate or Lump Sum in Words:***	№	2		
1.2.4a New Item	Contractor Shall remove existing, newly added Water Heater . Works to include - Removal of all pipes and accessories - Replacement of damaged tiles by new one similar to existing. All other nessessary works (Finishes and mechanical works) ***Rate or Lump Sum in Words:***	№	2		
	GENERAL TECHNICAL REQUIREMENTS **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION**				
2.3	**Drain Cover** Supply and install floor drain cover (P.E) 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 Engineer instructions				
2.3.1	Cover for FCO ***Rate or Lump Sum in Words:***	№			
	SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**WATER PIPE WORK INSTALLATION**				
3.2	**Electrical Water Heater** Electrical water heater as specified and scheduled; include pipe work connections, temperature and pressure gauges, control and power wiring from the MCC, hot water and pipe work connections, control and high limit control valves, isolation and safety valves, thermal insulation, valve boxes, bonding and identification, and the heater should be of a good trade mark of European or west made or first class Lebanese product.				
3.2.2	EWH-02 (100 L) ***Rate or Lump Sum in Words:***	№			
	WATER PIPE WORK INSTALLATION **TOTAL CARRIED TO COLLECTION**				
4	**FIRE PROTECTION**				
	FIRE PROTECTION **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**SANITARY FIXTURES**				
5.2	**W.C. For Non Kids** 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 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)				
5.2.1	EWC-01 (Wall Hang - 52 x 36 cm) ***Rate or Lump Sum in Words:***	№			
5.2.3a New Item	EWC Accessories (Seat Cover - Flush Tank Cover / Push Button Etc…) ***Rate or Lump Sum in Words:***	№	6		
5.4	**Lavatories for Non Kids** Supply and install semi pedestal wash basin similar to Ideal Standard No. 742001 or approved equal 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) ***Rate or Lump Sum in Words:***	№			
5.4.2	LAV-02 (wall hang, handicapped with mixers 56 x 41 cm) ***Rate or Lump Sum in Words:***	№			
5.4.3a	LAV accessories (Traps - Mixers - Fixation, Etc…) ***Rate or Lump Sum in Words:***	№			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5.5	**Urinal** Supply and installation of high quality urinal units complete with proper wall fixation with anti-dust materials including drainage & water supply connection as per the approved shop drawings. Cost to include all necessary accessories, valves, sensors to provide workable system.				
5.5.1	Urinal ***Rate or Lump Sum in Words:***	№			
5.6	**Self Close Taps on Kids & Students Lavatories** Supply and install self close taps to be fixed in the lavatory body as manufactured by Grohe Item No. 36-173 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 ***Rate or Lump Sum in Words:***	№			
5.7	**Wall Type Self Close Taps on Drinking Basins** Supply and install self close taps to be fixed in the drinking basin body as manufactured by Grohe Item No. 36-176 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 ***Rate or Lump Sum in Words:***	№			
5.8	**Kitchen Sink Accessories** Supply and install kitchen sink accessories such as chrome trap, angle valve, mixers as specified				
5.8.1	Kitchen Sink Accessories ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5.10	**Lavatories Resin Accessories** Supply and install lavatories resin accessories such as chrome trap, angle valves as specified				
5.10.1	Lavatories Resin Accessories ***Rate or Lump Sum in Words:***	№	2		
5.14	**Hose Bib** Supply and install Hose Bib taps including water connection & all necessary accessories as required				
5.14.1	HB - 01 ***Rate or Lump Sum in Words:***	№	10		
5.14.2a New Item	Maintenace of Potable Water System Contractor shall ensure proper functionality of the system ***Rate or Lump Sum in Words:***	Item			
5.14.3a New Item	Rehabilitation of existing septic tank, including cleaning, crack and joint sealing, waterproofing, replacement of damaged fittings, and all necessary works to restore watertightness and proper operation ***Rate or Lump Sum in Words:***	Item			
	SANITARY FIXTURES **TOTAL CARRIED TO COLLECTION**				

Collection

Page №		Amount (US $)
3.1	GENERAL TECHNICAL REQUIREMENTS	.....
3.2	SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION	.....
3.3	WATER PIPE WORK INSTALLATION	.....
3.4	FIRE PROTECTION	.....
3.5	SANITARY FIXTURES	.....
	Total Carried to General Summary	.....

Bill № 4: Electrical Engineering Services



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**BASIC ELECTRICAL REQUIREMENTS** 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	**Fixing and Repairing** 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 ***Rate or Lump Sum in Words:***	LS	1		
1.1.2	Wires and cables ***Rate or Lump Sum in Words:***	LS			
1.1.3	Sockets and switches ***Rate or Lump Sum in Words:***	LS	1		
1.1.4	Circuit breakers ***Rate or Lump Sum in Words:***	LS			
1.1.5	Disconnecting switches ***Rate or Lump Sum in Words:***	LS			
	BASIC ELECTRICAL REQUIREMENTS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**PANELBOARDS**				
2.2	**Computer Lab Panel Board (Rehabilitation)**				
2.2.1	Rehabilitate and install the Computer Lab Panel Board, works to include: - Rehabilitation and connection - Wires installation - Accessories - All Accessories Failed Complete to shop drawings and to the satisfaction of the engineer (ready to use) ***Rate or Lump Sum in Words:***	№			
2.3a New Item	Supply and Install New Panel Board Cover ***Rate or Lump Sum in Words:***	№			
	PANELBOARDS **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**GENERAL LIGHTING INSTALLATIONS**				
3.1	**Lighting Fixtures** 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 φ ≥ 0.9 ***Rate or Lump Sum in Words:***	№			
3.1.2	Replace existing lighting fixtures with C1 ***Rate or Lump Sum in Words:***	№			
3.1.3	TYPE C2: as same as TYPE C1 but Pendent mounted ***Rate or Lump Sum in Words:***	№			
3.1.4	TYPE A2 / A3: 600x600 mm LED Panel 3600lm, 33W, 4000K, 80CRI surface-mount/recessed, die-cast aluminum, IP20 ***Rate or Lump Sum in Words:***	№			
3.1.5	TYPE A1: as same as TYPE A2 but Pendent mounted ***Rate or Lump Sum in Words:***	№			
3.1.6	TYPE N4 / N3: LED - 900lm - 12.5W - 3000K - 80CRI - WW Surface mounted / Recessed Downlight Round - 120 deg ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3.1.7	TYPE F: PLAFONIERA OVAL Wall mounted - IP54 Aluminum die-cast housing IK 06 - CLASS I Lamp SHOULD BE LED 900Lm, 4000K, 17W. ***Rate or Lump Sum in Words:***	№			
3.1.8	TYPE W: A++ / COB LED 3000K 230V CRI 90 - 3955lm - 42W IP65 - IK07 - Die-cast EN AB-47100 aluminum housing with high corrosion resistance. ***Rate or Lump Sum in Words:***	№			
3.1.9	TYPE L (LED): OVAL 18W 516Lm IP54 IK06 FOR LIFT & TECHNICAL SHAFTS. Wall mounted luminaire Aluminum die cast housing in EN AB-47100 (low copper content) with high resistance against corrosion. IK 06 Sand blasted glass diffuser. Lamp fixed position. LOR 43% Isolation: CLASS I. Black (cod.09). Lamp not included. ***Rate or Lump Sum in Words:***	№			
3.1.10	Replace Existing lighting fixtures with TYPE L (LED) ***Rate or Lump Sum in Words:***	№			
3.1.11	TYPE M: LED - 1500lm - 17W - 4000K - 80CRI - Ceiling mounted - With Motion Sensor. ***Rate or Lump Sum in Words:***	№			
3.1.12	Replace Existing lighting fixtures with TYPE M ***Rate or Lump Sum in Words:***	№			
3.1.13	TYPE EM: Ceiling Emergency Ceiling mounted non-maintained 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65. ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3.1.14	Replace Existing EM with LED Emergency ***Rate or Lump Sum in Words:***	№			
3.1.15	TYPE EM: Wall Emergency Wall mounted non-maintained, 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65. ***Rate or Lump Sum in Words:***	№			
3.1.16	TYPE EX: Exit sign LED light wall/ceiling mounted maintained, 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65 with engraved letters on fixtures ***Rate or Lump Sum in Words:***	№			
3.1.17	Replace Existing Exit with LED Exits ***Rate or Lump Sum in Words:***	№			
3.1.18	TYPE H: High Bay LED Lightning fixture pendent 100W, 220V, 50Hz. ***Rate or Lump Sum in Words:***	№			
	GENERAL LIGHTING INSTALLATIONS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
4	**FIRE ALARM SYSTEM**				
	FIRE ALARM SYSTEM **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**DATA SYSTEM**				
	DATA SYSTEM **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
6	**UNINTERRUPTIBLE POWER SUPPLY (UPS)**				
	UNINTERRUPTIBLE POWER SUPPLY (UPS) TOTAL CARRIED TO COLLECTION				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
7	**CCTV SYSTEM** Supply, install, connect and test CCTV system complete with conduits installations from the location of the NVR through the different CCTV camera outlets, including the pull or draw boxes and derivation boxes, the junction and outlet boxes, 19" Rack, and all necessary connections to the management station as shown on drawings as per Tender Specifications and the like to the satisfaction of the supervision engineer.				
7.3a New Item	Replace existing Cameras by new one Similar to existing ***Rate or Lump Sum in Words:***	№			
	CCTV SYSTEM **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8	**SOLAR SYSTEM**				
8.1	Supply, install, connect and test the solar lighting system for all Electrical Loads (excluding Lifts, Pumps and AC Units) in perfect operating conditions, including but not limited to: - Photovoltaic multi-crystalline solar panels as shown on the drawings. - Hybrid Inverter - All cables, wires, conduits and all necessary accessories - Aluminum PV mountings - The Contractor shall ensure complete solar system which should function as the main Power Supply - The Contractor should submit detailed shop drawings and materials for approval. - For all blocks of the schools - Lithium Batteries for (Off-Grid Solar Types) - All necessary elevated structures on roof and other areas which are needed to install the required solar panel as mentioned on drawings (Sheds, Parking, etc.) areas ***Rate or Lump Sum in Words:***	LS			
8.1.2a	Replace Unfuctional Battery by new one similar to existing				
8.1.2.1a	Deye BOS-G 51.2 kWh High-Voltage $LiFePO_4$ Battery Energy Storage System – Complete Supply, Installation, Testing & Commissioning ***Rate or Lump Sum in Words:***	№			
8.1.2.1b	Deye BOS-GM5.1 HV $LiFePO_4$ Battery, 51.2 V, 100 Ah, 5.12 kWh, including installation, testing and commissioning ***Rate or Lump Sum in Words:***	№			
8.1.2.1c	Acid Battery, 12 V, 250 Ah ***Rate or Lump Sum in Words:***	№			
	SOLAR SYSTEM **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9	**BELL SYSTEM**				
	BELL SYSTEM **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10	**LIFTS REHABILITATION**				
10.1	Rehabilitation of the 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: 650kg Speed: 1.5mps Entrance size/ type: 1100 mm wide single speed center opening ***Rate or Lump Sum in Words:***	№			
	LIFTS REHABILITATION **TOTAL CARRIED TO COLLECTION**				

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Collection

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General Summary
831-Bar Elias Secondary Public School



General Summary

Description	Amount (US $)
Bill № 2: Civil and Architectural Works ……	
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* Discount by Tenderer (_____ %) ……	
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* Total Amount of Tender in Words:

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Bill № 2: Civil and Architectural Works

Bill № 3: Mechanical Engineering Services

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General Summary

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Bill № 2: Civil and Architectural Works



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**SITE PREPARATION AND DEMOLITION**				
1.1	**Demolishing and Removal of Debris**				
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. ***Rate or Lump Sum in Words:***	LS	1		
1.1a New Item	**Dismantling** The works include the dismantling works related to the newly installed water tanks and prefabricated units. - The contractor shall deliver the dismantled items to the Building administration / MEHE. ***Rate or Lump Sum in Words:***				
1.1.1.a New Item	Water Tanks ***Rate or Lump Sum in Words:***	№			
1.1.1.b New Item	Prefabricated Units ***Rate or Lump Sum in Words:***	№			
1.1.1.c New Item	Partitions of any type ***Rate or Lump Sum in Words:***	m2			
	SITE PREPARATION AND DEMOLITION **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**EXTERNAL WORKS**				
2.4 2.4.2	**School Fences with Related Gates** Rehabilitate Existing Fence (Strengthening & Rehabilitation) Work to include - Rehabilitate and support all the existing fence as per drawings - Determine the places that requires support - Preparation of shop drawings - Replace all broken elements - Redo all damaged elements and to be similar to existing elements - Finishing works as existing (plastering, paints, stone cladding, etc.) - Rehabilitate existing steel protection (Replace all damaged part by new similar to existing and paint with epoxy as specified) - Replace existing chain link by new one (Galvanized) - Reconstruct the broken and damaged parts and rehabilitate as it was with all similar materials including steel parts with related epoxy paint as per the engineer instructions ***Rate or Lump Sum in Words:***	m			
2.5 2.5.1	**Ramp for External Existing Sidewalk** 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 ***Rate or Lump Sum in Words:***	LS			
	EXTERNAL WORKS **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**CONCRETE** **Not Applicable**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
4	**MASONRY**				
	SITE PREPARATION AND DEMOLITION TOTAL CARRIED TO COLLECTION				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**METAL WORKS**				
5.1	**Provide New Steel Work (Door & Windows)**				
5.1.3	Provide new double glazed aluminum windows with new burglar proof protection ***Rate or Lump Sum in Words:***	№			
5.2	**Rehabilitate and Maintain the Existing Steel Work (Burglar Proof Protection + Opening)** 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 ***Rate or Lump Sum in Words:***	№			
5.2.7b New Item	Rehabilitate existing steel doors work to include all door accessories such as lock, handle and all necessary accessories. ***Rate or Lump Sum in Words:***	№			
5.5a **New Item**	**Steel Handrail** - Provide new metal handrail similar to exist with all all necessary accessories - Apply one layer of epoxy base paint - Apply putty - Apply epoxy paint as per specification All needed items as per the Engineer instructions				
5.5.1a New Item	Above Parapet ***Rate or Lump Sum in Words:***	m			
	METAL WORKS **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
6	**WOOD AND PLASTICS**				
6.1	**Joinery Works**				
6.1.1	**Rehabilitate Existing Kitchen Cupboards** 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 ***Rate or Lump Sum in Words:***	m			
6.1.2	**Rehabilitate Timber Cupboard** Rehabilitate timber cupboards with plastic laminate color, work to include sub framing, drawer units, shelves, fixing and fastening hardware, heavy duty ironmongery, accessories, including finish, soft close, painting and all other related auxiliaries works as required by engineer - 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. - (No patching is allowed for existing wooden works) ***Rate or Lump Sum in Words:***	m^2			
	WOOD AND PLASTICS **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
7	**THERMAL AND MOISTURE PROTECTION**				
7.0	**Preliminaries**				
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 ***Rate or Lump Sum in Words:***	LS			
7.1 7.1.1	**Roof Waterproofing** 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 & debris - 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/m³ where required - Provide Geotextile layers - Provide all aluminum flashing with mastic - Provide finishing material as required - All as specified and approved shop drawings ***Rate or Lump Sum in Words:***	m²			
	THERMAL AND MOISTURE PROTECTION **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8	**DOOR AND WINDOWS**				
8.1	**Wooden Doors and Windows** 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	**Timber Doors** 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				
8.1.1.2	Provide new single leaf wooden door with view frame ***Rate or Lump Sum in Words:***	№			
8.1.1.5	Provide new toilet doors with related accessories as per specifications ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.1.3	**Rehabilitate the Existing Timber Doors** 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.				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.1.3.1.1	Rehabilitate and paint existing single leaf timber doors with related accessories ***Rate or Lump Sum in Words:***	№			
8.1.3.1.5a New Item	Supply and install wooden doors accessories (Handle - Lock - Etc…) ***Rate or Lump Sum in Words:***	№			
8.1.3.1.6a New Item	Replace broken glass of the wooden door view access window ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.2	**Aluminum Doors and Windows** 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	**New Aluminum Panels (Double Glass)** Supply and install the fabricated aluminum panels with double glass (6 - 12 - 6 mm) (Outer Glass should be Tempered)				
8.2.1.1	Provide new aluminum double glazed window & door panel ***Rate or Lump Sum in Words:***	№			
8.2.1.4	Replace existing elements by new single glazed aluminum windows (6mm) if the quantity of broken glass does not exceed 30% of whole building ***Rate or Lump Sum in Words:***	№			
8.2.2	**New Aluminum Internal Door** 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. ***Rate or Lump Sum in Words:***	№			
8.2.2.2	Provide new single glazed aluminum partition double leaf door ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
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 ***Rate or Lump Sum in Words:***	№			
8.2.3.1a New Item	Rehabilitate existing Doors ***Rate or Lump Sum in Words:***	№			
8.2.3.2a New Item	Rehabilitate existing aluminum Doors / Windows with all related accessories without Glass ***Rate or Lump Sum in Words:***	№			
	DOOR AND WINDOWS **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9	**FINISHES**				
9.1	**Cement Plaster** 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 9.1.1.1	**Internal and External Plaster Works** 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. ***Rate or Lump Sum in Words:***	m^2			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.1.2	**Repair of Existing Plaster (Internal - External) (Cracks, etc.)**				
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. Fill 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			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2	**Tiling Works (Similar to existing)** 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				
9.2.2 9.2.2.1	**New Glazed Colored Ceramic for Walls** Supply and install glazed colored ceramic for walls Include Ceramic Corner (first choice) ***Rate or Lump Sum in Words:***	m^2			
9.2.4 9.2.4.1	**Repair existing broken floor tiles and skirting (all types) and reinstall by new, similar to existing for all rooms and corridors** 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. ***Rate or Lump Sum in Words:***	LS			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2.4a New Item	**Repair existing broken tiles (all types) and reinstall by new, similar to existing for toilets, drinking Basin and kitchen**				
9.2.4.1a New Item	Rehabilitate and repair all damaged and broken tiles, 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. ***Rate or Lump Sum in Words:***	m^2			
9.2.7	**Clean and Rub the Existing Floor Tiles and Skirting** 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				
9.2.7.2	Type 2: Ceramic ***Rate or Lump Sum in Words:***	m^2			
9.2.7.3	Type 3: Mosaic ***Rate or Lump Sum in Words:***	m^2			
9.2.7.5	Type 5: Skirting (any type and size) ***Rate or Lump Sum in Words:***	m			
9.2.7.8a New Item	Type 8: Terrazzo ***Rate or Lump Sum in Words:***	m^2			
9.2.7.10a New Item	Type 10: Dismantling of the existing Faux parquet, Rehabilitate, Clean and Rub the Existing any type of flooring tiles and skirting ***Rate or Lump Sum in Words:***	m^2			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2.8	**<u>Clean the Existing Decorative Wall Tiles</u>** Rehabilitate any type of decorative wall tiles (mosaic - marble - etc.) Work to include: - All materials and labors - Grouting - Polish and rubbing - All needed items as per the Engineer instruction. - Works to be executed by experts				
9.2.8.4	Type 4: Terrazzo ***Rate or Lump Sum in Words:***	m²			
9.2.9	**<u>Colored PVC for Covered Indoor KG Playgrounds</u>** Supply and install first class safe and antibacterial colored P.V.C. flooring for indoor KG playgrounds at least 6mm thick (Design shape and colors of vinyl flooring should be approved by engineer prior to installation) Work to include: - Shop drawing for design, shape and colors of vinyl flooring should be submitted for each classroom separately for engineer approval - Laminate existing finish flooring after removing vinyl by special concrete material level - Make good and smooth the flooring - Apply self leveling special materials(if needed) to assume Vinyl best finishing - Remove all the existing skirting - Treat the place of the existing skirting - Place the special glue as specified - Place the flooring and screw the skirting P.V.C. profile Labors and materials, screw, etc. All needed items as per the Engineer instructions and approval. <u>Note</u>: Work should be executed by experts and should be executed in presence and approval of supervision engineer and as per required specifications for materials and executions. ***Rate or Lump Sum in Words:***	m²			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.3	**Suspended Ceilings (Similar to existing)** 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 specifications - 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	**Metal Sheet Strips Suspended Ceilings:**				
9.3.1.2	60 x 60 cm Aluminum Suspended Ceiling ***Rate or Lump Sum in Words:***	m^2			
9.4	**Gypsum Works (Similar to existing)**				
9.4.2	**Rehabilitate Existing Gypsum Suspended Ceiling (Tiles, Panels)**				
9.4.2.1	Rehabilitate existing gypsum board suspended ceiling n the case of damage or during construction. Works to include material, labor, equipment, etc. and to the engineer's approval ***Rate or Lump Sum in Words:***	m^2			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.5	**Painting**				
9.5.1	**Wall and Ceilings Paint Works** 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, ***All paint types must be lead-free and Low VOC (Volatile Organic Compounds)***				
9.5.1.1	Super Rubber Paint for new walls and ceilings ***Rate or Lump Sum in Words:***	m²			
9.5.1.2	Super Rubber Paint for old walls and ceilings ***Rate or Lump Sum in Words:***	m²	600		
9.5.1.3	Oil Paint for new walls and ceilings ***Rate or Lump Sum in Words:***	m²			
9.5.1.4	Oil Paints for old walls and ceilings ***Rate or Lump Sum in Words:***	m²	1,850		

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.5.2 9.5.2.1	**<u>Outside Walls Paint (Old and New Walls and Ceilings)</u>** 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. ***Rate or Lump Sum in Words:***	m^2			
9.5.6	**<u>Epoxy coating (Playground -covered indoor Car Parking)</u>**				
9.5.6.5a New Item	For Roof ***Rate or Lump Sum in Words:***	m^2			
	FINISHES **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10	**SPECIALTIES**				
10.1	**Bathrooms Accessories** - 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				
10.1.1 10.1.1.1	**Paper Roller Holder** Supply and install paper holder no rust, no stain stainless steel 316 with all accessories and fixation (anti-rust materials) for good quality and at the places shown on drawings All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	№			
10.1.2 10.1.2.1	**Soap Dispenser** Supply and install stainless steel 316 no rust, no stain, soap dispenser wall type fixation (anti-rust materials and accessories) with all needed items All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	№			
10.1.3 10.1.3.1	**Paper Holder Box** Supply and install paper holder box from stainless steel 316 no rust, no stain, with all needed works and fixation (anti-rust materials and accessories) The box should be from a good manufacturer All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	№			
10.1.4	**Mirror for Lavatories** 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 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) ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10.1.5	**<u>Handicapped Bathroom Accessories</u>** - Remove and cart away old damaged fixtures Supply and install all needed bars for the handicapped toilet of stainless steel 316 Work to include: - Materials - Labors - and all needed items as per the Engineer instructions				
10.1.5.1	Supply and install vertical grab rail 60cm bars ***Rate or Lump Sum in Words:***	№			
10.1.5.2	Supply and install Horizontal grab rail 60cm bars ***Rate or Lump Sum in Words:***	№			
10.1.5.3	Supply and install Drop Down Rail removable arm 80cm ***Rate or Lump Sum in Words:***	№			
10.1.5.4	Alarm pull cord for emergency ***Rate or Lump Sum in Words:***	№			
10.1.5.5a New Item	Supply and install partition between urinals similar to existing with all needed fixation accessories ***Rate or Lump Sum in Words:***	№			
10.2	**Classroom Specialties**				
10.2.1 10.2.1.1	**<u>White Teaching Boards</u>** Supply and install White teaching boards from approved manufacturer as per specifications of Ministry of Education and Higher Education and corresponding to the site Cost to include: - (3600mm x 1200mm) final dimensions as per site limitation - Materials and labors - Felt marker pens and eraser (12 marker pens + 2 erases for each white board) - Stainless Steel screws - Remove the existing board - All needed works as per the Engineer instructions ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10.3	**Resin Work**				
10.3.1	**Drinking Basin** 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) ***Rate or Lump Sum in Words:***	№			
10.3.1.7a New Item	Rehabilitation of existing Drinking Basin - Any Length (Traps, Taps, Cleaning and repair of any damaged elements) ***Rate or Lump Sum in Words:***	№			
10.3.4	**Kitchen Counter** 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				
10.3.4.3	Kitchen Counter - Length (1.76 to 2.05 m) ***Rate or Lump Sum in Words:***	№			
10.5	**Internal Curtains** Supply and install internal rolling type tissue and polyester collapsible type curtain as per specifications and at the location as shown on drawings Works to include: - Materials - Labors - Heavy Duty Accessories - All needed works as per the Engineer instructions and approval				
10.5.1	On External Opening ***Rate or Lump Sum in Words:***	m^2			
	SPECIALTIES **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
11	**EQUIPMENT**				
	EQUIPMENT **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
12	**FURNISHINGS**				
12.1	**INSTITUTIONAL FURNITURE** Supply and install the following institutional furniture complete including all necessary fixing and accessories, all as specified, shown on the drawings and to the satisfaction of the Engineer.				
12.1.1	**Classrooms Furniture**				
12.1.1.1	Standard desk with chair for classroom, single seat. ***Rate or Lump Sum in Words:***	№			
12.1.2	**Conference Room Furniture**				
12.1.2.1	Standard table. ***Rate or Lump Sum in Words:***	№			
12.1.2.2	Standard chairs. ***Rate or Lump Sum in Words:***	№			
12.1.6 12.1.6.1	**Hooks with Rails for Hats and Coats** Hooks with rails for hats and coats, rail size 120mm high x 20mm thick, softwood, treated and painted, countersunk screwed to wall & painted steel hooks every 200 mm (5№ hooks per linear meter of rail). ***Rate or Lump Sum in Words:***	lm			
	FURNISHINGS **TOTAL CARRIED TO COLLECTION**				

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Bill № 3: Mechanical Engineering Services



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**GENERAL TECHNICAL REQUIREMENTS**				
1.1	**General Mechanical Requirements**				
1.1.1	Revise all Mechanical drawings and make sure that they can be executed properly. ***Rate or Lump Sum in Words:***	Item			
1.2	**Rehabilitation Works General Requirements** 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, floor drains, roof drains, manholes, pumps, WC tanks, adding where applicable all necessary valves, flush valves, etc., and all other necessary works. ***Rate or Lump Sum in Words:***	Item	1		
1.2.2	Maintenance and rehabilitation of existing HVAC & fire fighting systems, including all necessary piping, duct works, pumps and controls, fans, mechanical works inside shafts, air conditioning units, etc. ***Rate or Lump Sum in Words:***	Item			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1.2.3a New Item	Contractor Shall remove existing, newly added showers. Works to include - Removal of fixtures (Shower head or hand) - Replacement of damaged tiles by new one similar to existing. All other nessessary works (Finishes and mechanical works) ***Rate or Lump Sum in Words:***	№	1		
1.2.4a New Item	Contractor Shall remove existing, newly added Water Heater . Works to include - Removal of all pipes and accessories - Replacement of damaged tiles by new one similar to existing. All other nessessary works (Finishes and mechanical works) ***Rate or Lump Sum in Words:***	№	1		
	GENERAL TECHNICAL REQUIREMENTS **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION**				
2.3	**Drain Cover** Supply and install floor drain cover (P.E) 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 Engineer instructions				
2.3.1	Cover for FCO ***Rate or Lump Sum in Words:***	№			
	SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**WATER PIPE WORK INSTALLATION**				
3.2	**Electrical Water Heater** Electrical water heater as specified and scheduled; include pipe work connections, temperature and pressure gauges, control and power wiring from the MCC, hot water and pipe work connections, control and high limit control valves, isolation and safety valves, thermal insulation, valve boxes, bonding and identification, and the heater should be of a good trade mark of European or west made or first class Lebanese product.				
3.2.2	EWH-02 (100 L) ***Rate or Lump Sum in Words:***	№			
	WATER PIPE WORK INSTALLATION TOTAL CARRIED TO COLLECTION				
4	**FIRE PROTECTION**				
	FIRE PROTECTION TOTAL CARRIED TO COLLECTION				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**SANITARY FIXTURES**				
5.2	**W.C. For Non Kids** 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 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)				
5.2.1	EWC-01 (Wall Hang - 52 x 36 cm) ***Rate or Lump Sum in Words:***	№			
5.2.3a New Item	EWC Accessories (Seat Cover - Flush Tank Cover / Push Button Etc…) ***Rate or Lump Sum in Words:***	№			
5.4	**Lavatories for Non Kids** Supply and install semi pedestal wash basin similar to Ideal Standard No. 742001 or approved equal 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) ***Rate or Lump Sum in Words:***	№			
5.4.2	LAV-02 (wall hang, handicapped with mixers 56 x 41 cm) ***Rate or Lump Sum in Words:***	№			
5.4.3a	LAV accessories (Traps - Mixers - Fixation, Etc…) ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5.5	**Urinal** Supply and installation of high quality urinal units complete with proper wall fixation with anti-dust materials including drainage & water supply connection as per the approved shop drawings. Cost to include all necessary accessories, valves, sensors to provide workable system.				
5.5.1	Urinal ***Rate or Lump Sum in Words:***	№			
5.6	**Self Close Taps on Kids & Students Lavatories** Supply and install self close taps to be fixed in the lavatory body as manufactured by Grohe Item No. 36-173 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 ***Rate or Lump Sum in Words:***	№			
5.7	**Wall Type Self Close Taps on Drinking Basins** Supply and install self close taps to be fixed in the drinking basin body as manufactured by Grohe Item No. 36-176 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 ***Rate or Lump Sum in Words:***	№			
5.8	**Kitchen Sink Accessories** Supply and install kitchen sink accessories such as chrome trap, angle valve, mixers as specified				
5.8.1	Kitchen Sink Accessories ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5.10	**Lavatories Resin Accessories** Supply and install lavatories resin accessories such as chrome trap, angle valves as specified				
5.10.1	Lavatories Resin Accessories ***Rate or Lump Sum in Words:***	№			
5.14	**Hose Bib** Supply and install Hose Bib taps including water connection & all necessary accessories as required				
5.14.1	HB - 01 ***Rate or Lump Sum in Words:***	№			
5.14.2a New Item	Maintenace of Potable Water System Contractor shall ensure proper functionality of the system ***Rate or Lump Sum in Words:***	Item			
5.14.3a New Item	Rehabilitation of existing septic tank, including cleaning, crack and joint sealing, waterproofing, replacement of damaged fittings, and all necessary works to restore watertightness and proper operation ***Rate or Lump Sum in Words:***	Item			
	SANITARY FIXTURES **TOTAL CARRIED TO COLLECTION**				

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3.4	FIRE PROTECTION	.....
3.5	SANITARY FIXTURES	.....
	Total Carried to General Summary	.....



Bill № 4: Electrical Engineering Services



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**BASIC ELECTRICAL REQUIREMENTS** 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	**Fixing and Repairing** 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 ***Rate or Lump Sum in Words:***	LS	1		
1.1.2	Wires and cables ***Rate or Lump Sum in Words:***	LS			
1.1.3	Sockets and switches ***Rate or Lump Sum in Words:***	LS	1		
1.1.4	Circuit breakers ***Rate or Lump Sum in Words:***	LS			
1.1.5	Disconnecting switches ***Rate or Lump Sum in Words:***	LS			
	BASIC ELECTRICAL REQUIREMENTS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**PANELBOARDS**				
2.2	**Computer Lab Panel Board (Rehabilitation)**				
2.2.1	Rehabilitate and install the Computer Lab Panel Board, works to include: - Rehabilitation and connection - Wires installation - Accessories - All Accessories Failed Complete to shop drawings and to the satisfaction of the engineer (ready to use) ***Rate or Lump Sum in Words:***	№			
2.3a New Item	Supply and Install New Panel Board Cover ***Rate or Lump Sum in Words:***	№			
	PANELBOARDS **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**GENERAL LIGHTING INSTALLATIONS**				
3.1	**Lighting Fixtures** 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 φ ≥ 0.9 ***Rate or Lump Sum in Words:***	№			
3.1.2	Replace existing lighting fixtures with C1 ***Rate or Lump Sum in Words:***	№			
3.1.3	TYPE C2: as same as TYPE C1 but Pendent mounted ***Rate or Lump Sum in Words:***	№			
3.1.4	TYPE A2 / A3: 600x600 mm LED Panel 3600lm, 33W, 4000K, 80CRI surface-mount/recessed, die-cast aluminum, IP20 ***Rate or Lump Sum in Words:***	№			
3.1.5	TYPE A1: as same as TYPE A2 but Pendent mounted ***Rate or Lump Sum in Words:***	№			
3.1.6	TYPE N4 / N3: LED - 900lm - 12.5W - 3000K - 80CRI - WW Surface mounted / Recessed Downlight Round - 120 deg ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3.1.7	TYPE F: PLAFONIERA OVAL Wall mounted - IP54 Aluminum die-cast housing IK 06 - CLASS I Lamp SHOULD BE LED 900Lm, 4000K, 17W. ***Rate or Lump Sum in Words:***	№			
3.1.8	TYPE W: A++ / COB LED 3000K 230V CRI 90 - 3955lm - 42W IP65 - IK07 - Die-cast EN AB-47100 aluminum housing with high corrosion resistance. ***Rate or Lump Sum in Words:***	№			
3.1.9	TYPE L (LED): OVAL 18W 516Lm IP54 IK06 FOR LIFT & TECHNICAL SHAFTS. Wall mounted luminaire Aluminum die cast housing in EN AB-47100 (low copper content) with high resistance against corrosion. IK 06 Sand blasted glass diffuser. Lamp fixed position. LOR 43% Isolation: CLASS I. Black (cod.09). Lamp not included. ***Rate or Lump Sum in Words:***	№			
3.1.10	Replace Existing lighting fixtures with TYPE L (LED) ***Rate or Lump Sum in Words:***	№			
3.1.11	TYPE M: LED - 1500lm - 17W - 4000K - 80CRI - Ceiling mounted - With Motion Sensor. ***Rate or Lump Sum in Words:***	№			
3.1.12	Replace Existing lighting fixtures with TYPE M ***Rate or Lump Sum in Words:***	№			
3.1.13	TYPE EM: Ceiling Emergency Ceiling mounted non-maintained 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65. ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3.1.14	Replace Existing EM with LED Emergency ***Rate or Lump Sum in Words:***	№			
3.1.15	TYPE EM: Wall Emergency Wall mounted non-maintained, 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65. ***Rate or Lump Sum in Words:***	№			
3.1.16	TYPE EX: Exit sign LED light wall/ceiling mounted maintained, 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65 with engraved letters on fixtures ***Rate or Lump Sum in Words:***	№			
3.1.17	Replace Existing Exit with LED Exits ***Rate or Lump Sum in Words:***	№			
3.1.18	TYPE H: High Bay LED Lightning fixture pendent 100W, 220V, 50Hz. ***Rate or Lump Sum in Words:***	№			
	GENERAL LIGHTING INSTALLATIONS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
4	**FIRE ALARM SYSTEM**				
	FIRE ALARM SYSTEM **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**DATA SYSTEM**				
	DATA SYSTEM **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
6	**UNINTERRUPTIBLE POWER SUPPLY (UPS)**				
	UNINTERRUPTIBLE POWER SUPPLY (UPS) TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
7	**CCTV SYSTEM** Supply, install, connect and test CCTV system complete with conduits installations from the location of the NVR through the different CCTV camera outlets, including the pull or draw boxes and derivation boxes, the junction and outlet boxes, 19" Rack, and all necessary connections to the management station as shown on drawings as per Tender Specifications and the like to the satisfaction of the supervision engineer.				
7.3a New Item	Replace existing Cameras by new one Similar to existing ***Rate or Lump Sum in Words:***	№			
	CCTV SYSTEM **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8	**SOLAR SYSTEM**				
8.1	Supply, install, connect and test the solar lighting system for all Electrical Loads (excluding Lifts, Pumps and AC Units) in perfect operating conditions, including but not limited to: - Photovoltaic multi-crystalline solar panels as shown on the drawings. - Hybrid Inverter - All cables, wires, conduits and all necessary accessories - Aluminum PV mountings - The Contractor shall ensure complete solar system which should function as the main Power Supply - The Contractor should submit detailed shop drawings and materials for approval. - For all blocks of the schools - Lithium Batteries for (Off-Grid Solar Types) - All necessary elevated structures on roof and other areas which are needed to install the required solar panel as mentioned on drawings (Sheds, Parking, etc.) areas ***Rate or Lump Sum in Words:***	LS			
8.1.2a	Replace Unfuctional Battery by new one similar to existing				
8.1.2.1a	Deye BOS-G 51.2 kWh High-Voltage $LiFePO_4$ Battery Energy Storage System – Complete Supply, Installation, Testing & Commissioning ***Rate or Lump Sum in Words:***	№			
8.1.2.1b	Deye BOS-GM5.1 HV $LiFePO_4$ Battery, 51.2 V, 100 Ah, 5.12 kWh, including installation, testing and commissioning ***Rate or Lump Sum in Words:***	№			
8.1.2.1c	Acid Battery, 12 V, 250 Ah ***Rate or Lump Sum in Words:***	№			
	SOLAR SYSTEM **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9	**BELL SYSTEM**				
	BELL SYSTEM **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10	**LIFTS REHABILITATION**				
10.1	Rehabilitation of the 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: 650kg Speed: 1.5mps Entrance size/ type: 1100 mm wide single speed center opening ***Rate or Lump Sum in Words:***	№			
	LIFTS REHABILITATION **TOTAL CARRIED TO COLLECTION**				

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General Summary
838-Maxeh Mixed Public School



General Summary

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Bill № 2: Civil and Architectural Works



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**SITE PREPARATION AND DEMOLITION**				
1.1	**Demolishing and Removal of Debris**				
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. ***Rate or Lump Sum in Words:***	LS	1		
1.1a New Item	**Dismantling** The works include the dismantling works related to the newly installed water tanks and prefabricated units. - The contractor shall deliver the dismantled items to the Building administration / MEHE. ***Rate or Lump Sum in Words:***				
1.1.1.a New Item	Water Tanks ***Rate or Lump Sum in Words:***	№	3		
1.1.1.b New Item	Prefabricated Units ***Rate or Lump Sum in Words:***	№			
1.1.1.c New Item	Partitions of any type ***Rate or Lump Sum in Words:***	m2			
	SITE PREPARATION AND DEMOLITION **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**EXTERNAL WORKS**				
2.4 2.4.2	**School Fences with Related Gates** Rehabilitate Existing Fence (Strengthening & Rehabilitation) Work to include - Rehabilitate and support all the existing fence as per drawings - Determine the places that requires support - Preparation of shop drawings - Replace all broken elements - Redo all damaged elements and to be similar to existing elements - Finishing works as existing (plastering, paints, stone cladding, etc.) - Rehabilitate existing steel protection (Replace all damaged part by new similar to existing and paint with epoxy as specified) - Replace existing chain link by new one (Galvanized) - Reconstruct the broken and damaged parts and rehabilitate as it was with all similar materials including steel parts with related epoxy paint as per the engineer instructions ***Rate or Lump Sum in Words:***	m			
2.5 2.5.1	**Ramp for External Existing Sidewalk** 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 ***Rate or Lump Sum in Words:***	LS			
	EXTERNAL WORKS **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**CONCRETE** **Not Applicable**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
4	**MASONRY**				
	SITE PREPARATION AND DEMOLITION **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**METAL WORKS**				
5.1	**Provide New Steel Work (Door & Windows)**				
5.1.3	Provide new double glazed aluminum windows with new burglar proof protection ***Rate or Lump Sum in Words:***	№			
5.2	**Rehabilitate and Maintain the Existing Steel Work (Burglar Proof Protection + Opening)** 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 ***Rate or Lump Sum in Words:***	№			
5.2.7b New Item	Rehabilitate existing steel doors work to include all door accessories such as lock, handle and all necessary accessories. ***Rate or Lump Sum in Words:***	№			
5.5a New Item	**Steel Handrail** - Provide new metal handrail similar to exist with all all necessary accessories - Apply one layer of epoxy base paint - Apply putty - Apply epoxy paint as per specification All needed items as per the Engineer instructions				
5.5.1a New Item	Above Parapet ***Rate or Lump Sum in Words:***	m			
	METAL WORKS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
6	**WOOD AND PLASTICS**				
6.1	**Joinery Works**				
6.1.1	**Rehabilitate Existing Kitchen Cupboards** 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 ***Rate or Lump Sum in Words:***	m			
6.1.2	**Rehabilitate Timber Cupboard** Rehabilitate timber cupboards with plastic laminate color, work to include sub framing, drawer units, shelves, fixing and fastening hardware, heavy duty ironmongery, accessories, including finish, soft close, painting and all other related auxiliaries works as required by engineer - 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. - (No patching is allowed for existing wooden works) ***Rate or Lump Sum in Words:***	m^2			
	WOOD AND PLASTICS **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
7	**THERMAL AND MOISTURE PROTECTION**				
7.0	**Preliminaries**				
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 ***Rate or Lump Sum in Words:***	LS			
7.1 7.1.1	**Roof Waterproofing** 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 & debris - 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/m³ where required - Provide Geotextile layers - Provide all aluminum flashing with mastic - Provide finishing material as required - All as specified and approved shop drawings ***Rate or Lump Sum in Words:***	m²			
	THERMAL AND MOISTURE PROTECTION **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8	**DOOR AND WINDOWS**				
8.1	**Wooden Doors and Windows** 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	**Timber Doors** 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				
8.1.1.2	Provide new single leaf wooden door with view frame ***Rate or Lump Sum in Words:***	№			
8.1.1.5	Provide new toilet doors with related accessories as per specifications ***Rate or Lump Sum in Words:***	№			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.1.3	**Rehabilitate the Existing Timber Doors** 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.				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.1.3.1.1	Rehabilitate and paint existing single leaf timber doors with related accessories ***Rate or Lump Sum in Words:***	№			
8.1.3.1.5a New Item	Supply and install wooden doors accessories (Handle - Lock - Etc…) ***Rate or Lump Sum in Words:***	№	5		
8.1.3.1.6a New Item	Replace broken glass of the wooden door view access window ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.2	**Aluminum Doors and Windows** 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	**New Aluminum Panels (Double Glass)** Supply and install the fabricated aluminum panels with double glass (6 - 12 - 6 mm) (Outer Glass should be Tempered)				
8.2.1.1	Provide new aluminum double glazed window & door panel ***Rate or Lump Sum in Words:***	№			
8.2.1.4	Replace existing elements by new single glazed aluminum windows (6mm) if the quantity of broken glass does not exceed 30% of whole building ***Rate or Lump Sum in Words:***	№			
8.2.2	**New Aluminum Internal Door** 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. ***Rate or Lump Sum in Words:***	№			
8.2.2.2	Provide new single glazed aluminum partition double leaf door ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
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 ***Rate or Lump Sum in Words:***	№			
8.2.3.1a New Item	Rehabilitate existing Doors ***Rate or Lump Sum in Words:***	№			
8.2.3.2a New Item	Rehabilitate existing aluminum Doors / Windows with all related accessories without Glass ***Rate or Lump Sum in Words:***	№			
	DOOR AND WINDOWS **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9	**FINISHES**				
9.1	**Cement Plaster** 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 9.1.1.1	**Internal and External Plaster Works** 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. ***Rate or Lump Sum in Words:***	m^2			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.1.2	**Repair of Existing Plaster (Internal - External) (Cracks, etc.)**				
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. Fill 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			



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2	**Tiling Works (Similar to existing)** 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				
9.2.2 9.2.2.1	**New Glazed Colored Ceramic for Walls** Supply and install glazed colored ceramic for walls Include Ceramic Corner (first choice) ***Rate or Lump Sum in Words:***	m²			
9.2.4 9.2.4.1	**Repair existing broken floor tiles and skirting (all types) and reinstall by new, similar to existing for all rooms and corridors** 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. ***Rate or Lump Sum in Words:***	LS			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2.4a New Item	**<u>Repair existing broken tiles (all types) and reinstall by new, similar to existing for toilets, drinking Basin and kitchen</u>**				
9.2.4.1a New Item	Rehabilitate and repair all damaged and broken tiles, 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. ***Rate or Lump Sum in Words:***	m²			
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				
9.2.7.2	Type 2: Ceramic ***Rate or Lump Sum in Words:***	m²			
9.2.7.3	Type 3: Mosaic ***Rate or Lump Sum in Words:***	m²			
9.2.7.5	Type 5: Skirting (any type and size) ***Rate or Lump Sum in Words:***	m			
9.2.7.8a New Item	Type 8: Terrazzo ***Rate or Lump Sum in Words:***	m²			
9.2.7.10a New Item	Type 10: Dismantling of the existing Faux parquet, Rehabilitate, Clean and Rub the Existing any type of flooring tiles and skirting ***Rate or Lump Sum in Words:***	m²			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2.8	**<u>Clean the Existing Decorative Wall Tiles</u>** Rehabilitate any type of decorative wall tiles (mosaic - marble - etc.) Work to include: - All materials and labors - Grouting - Polish and rubbing - All needed items as per the Engineer instruction. - Works to be executed by experts				
9.2.8.4	Type 4: Terrazzo ***Rate or Lump Sum in Words:***	m²			
9.2.9	**<u>Colored PVC for Covered Indoor KG Playgrounds</u>** Supply and install first class safe and antibacterial colored P.V.C. flooring for indoor KG playgrounds at least 6mm thick (Design shape and colors of vinyl flooring should be approved by engineer prior to installation) Work to include: - Shop drawing for design, shape and colors of vinyl flooring should be submitted for each classroom separately for engineer approval - Laminate existing finish flooring after removing vinyl by special concrete material level - Make good and smooth the flooring - Apply self leveling special materials(if needed) to assume Vinyl best finishing - Remove all the existing skirting - Treat the place of the existing skirting - Place the special glue as specified - Place the flooring and screw the skirting P.V.C. profile Labors and materials, screw, etc. All needed items as per the Engineer instructions and approval. <u>Note</u>: Work should be executed by experts and should be executed in presence and approval of supervision engineer and as per required specifications for materials and executions. ***Rate or Lump Sum in Words:***	m²			



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.3	**Suspended Ceilings (Similar to existing)** 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 specifications - 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	**Metal Sheet Strips Suspended Ceilings:**				
9.3.1.2	60 x 60 cm Aluminum Suspended Ceiling ***Rate or Lump Sum in Words:***	m²			
9.4	**Gypsum Works (Similar to existing)**				
9.4.2	**Rehabilitate Existing Gypsum Suspended Ceiling (Tiles, Panels)**				
9.4.2.1	Rehabilitate existing gypsum board suspended ceiling n the case of damage or during construction. Works to include material, labor, equipment, etc. and to the engineer's approval ***Rate or Lump Sum in Words:***	m²			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.5	**Painting**				
9.5.1	**Wall and Ceilings Paint Works** 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, ***All paint types must be lead-free and Low VOC (Volatile Organic Compounds)***				
9.5.1.1	Super Rubber Paint for new walls and ceilings ***Rate or Lump Sum in Words:***	m²			
9.5.1.2	Super Rubber Paint for old walls and ceilings ***Rate or Lump Sum in Words:***	m²	100		
9.5.1.3	Oil Paint for new walls and ceilings ***Rate or Lump Sum in Words:***	m²			
9.5.1.4	Oil Paints for old walls and ceilings ***Rate or Lump Sum in Words:***	m²	200		

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
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. ***Rate or Lump Sum in Words:***	m²			
9.5.6	**<u>Epoxy coating (Playground -covered indoor Car Parking)</u>**				
9.5.6.5a New Item	For Roof ***Rate or Lump Sum in Words:***	m²			
	FINISHES **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10	**SPECIALTIES**				
10.1	**Bathrooms Accessories** - 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				
10.1.1 10.1.1.1	**Paper Roller Holder** Supply and install paper holder no rust, no stain stainless steel 316 with all accessories and fixation (anti-rust materials) for good quality and at the places shown on drawings All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	№	2		
10.1.2 10.1.2.1	**Soap Dispenser** Supply and install stainless steel 316 no rust, no stain, soap dispenser wall type fixation (anti-rust materials and accessories) with all needed items All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	№	2		
10.1.3 10.1.3.1	**Paper Holder Box** Supply and install paper holder box from stainless steel 316 no rust, no stain, with all needed works and fixation (anti-rust materials and accessories) The box should be from a good manufacturer All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	№	2		
10.1.4	**Mirror for Lavatories** 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 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) ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10.1.5	**<u>Handicapped Bathroom Accessories</u>** - Remove and cart away old damaged fixtures Supply and install all needed bars for the handicapped toilet of stainless steel 316 Work to include: - Materials - Labors - and all needed items as per the Engineer instructions				
10.1.5.1	Supply and install vertical grab rail 60cm bars ***Rate or Lump Sum in Words:***	№			
10.1.5.2	Supply and install Horizontal grab rail 60cm bars ***Rate or Lump Sum in Words:***	№			
10.1.5.3	Supply and install Drop Down Rail removable arm 80cm ***Rate or Lump Sum in Words:***	№			
10.1.5.4	Alarm pull cord for emergency ***Rate or Lump Sum in Words:***	№			
10.1.5.5a New Item	Supply and install partition between urinals similar to existing with all needed fixation accessories ***Rate or Lump Sum in Words:***	№			
10.2	**Classroom Specialties**				
10.2.1 10.2.1.1	**<u>White Teaching Boards</u>** Supply and install White teaching boards from approved manufacturer as per specifications of Ministry of Education and Higher Education and corresponding to the site Cost to include: - (3600mm x 1200mm) final dimensions as per site limitation - Materials and labors - Felt marker pens and eraser (12 marker pens + 2 erases for each white board) - Stainless Steel screws - Remove the existing board - All needed works as per the Engineer instructions ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10.3	**Resin Work**				
10.3.1	**Drinking Basin** 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) ***Rate or Lump Sum in Words:***	№			
10.3.1.7a New Item	Rehabilitation of existing Drinking Basin - Any Length (Traps, Taps, Cleaning and repair of any damaged elements) ***Rate or Lump Sum in Words:***	№			
10.3.4	**Kitchen Counter** 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				
10.3.4.3	Kitchen Counter - Length (1.76 to 2.05 m) ***Rate or Lump Sum in Words:***	№			
10.5	**Internal Curtains** Supply and install internal rolling type tissue and polyester collapsible type curtain as per specifications and at the location as shown on drawings Works to include: - Materials - Labors - Heavy Duty Accessories - All needed works as per the Engineer instructions and approval				
10.5.1	On External Opening ***Rate or Lump Sum in Words:***	m²			
	SPECIALTIES **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
11	**EQUIPMENT**				
	EQUIPMENT **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
12	**FURNISHINGS**				
12.1	**INSTITUTIONAL FURNITURE** Supply and install the following institutional furniture complete including all necessary fixing and accessories, all as specified, shown on the drawings and to the satisfaction of the Engineer.				
12.1.1	**Classrooms Furniture**				
12.1.1.1	Standard desk with chair for classroom, single seat. ***Rate or Lump Sum in Words:***	№			
12.1.2	**Conference Room Furniture**				
12.1.2.1	Standard table. ***Rate or Lump Sum in Words:***	№			
12.1.2.2	Standard chairs. ***Rate or Lump Sum in Words:***	№			
12.1.6 12.1.6.1	**Hooks with Rails for Hats and Coats** Hooks with rails for hats and coats, rail size 120mm high x 20mm thick, softwood, treated and painted, countersunk screwed to wall & painted steel hooks every 200 mm (5№ hooks per linear meter of rail). ***Rate or Lump Sum in Words:***	lm			
	FURNISHINGS **TOTAL CARRIED TO COLLECTION**				



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2.2	EXTERNAL WORKS	.....
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Bill № 3: Mechanical Engineering Services



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**GENERAL TECHNICAL REQUIREMENTS**				
1.1	**General Mechanical Requirements**				
1.1.1	Revise all Mechanical drawings and make sure that they can be executed properly. ***Rate or Lump Sum in Words:***	Item			
1.2	**Rehabilitation Works General Requirements** 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, floor drains, roof drains, manholes, pumps, WC tanks, adding where applicable all necessary valves, flush valves, etc., and all other necessary works. ***Rate or Lump Sum in Words:***	Item	1		
1.2.2	Maintenance and rehabilitation of existing HVAC & fire fighting systems, including all necessary piping, duct works, pumps and controls, fans, mechanical works inside shafts, air conditioning units, etc. ***Rate or Lump Sum in Words:***	Item			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1.2.3a New Item	Contractor Shall remove existing, newly added showers. Works to include - Removal of fixtures (Shower head or hand) - Replacement of damaged tiles by new one similar to existing. All other nessessary works (Finishes and mechanical works) ***Rate or Lump Sum in Words:***	№	1		
1.2.4a New Item	Contractor Shall remove existing, newly added Water Heater . Works to include - Removal of all pipes and accessories - Replacement of damaged tiles by new one similar to existing. All other nessessary works (Finishes and mechanical works) ***Rate or Lump Sum in Words:***	№	3		
	GENERAL TECHNICAL REQUIREMENTS **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION**				
2.3	**Drain Cover** Supply and install floor drain cover (P.E) 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 Engineer instructions				
2.3.1	Cover for FCO ***Rate or Lump Sum in Words:***	№			
	SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**WATER PIPE WORK INSTALLATION**				
3.2	**Electrical Water Heater** Electrical water heater as specified and scheduled; include pipe work connections, temperature and pressure gauges, control and power wiring from the MCC, hot water and pipe work connections, control and high limit control valves, isolation and safety valves, thermal insulation, valve boxes, bonding and identification, and the heater should be of a good trade mark of European or west made or first class Lebanese product.				
3.2.2	EWH-02 (100 L) ***Rate or Lump Sum in Words:***	№			
	WATER PIPE WORK INSTALLATION TOTAL CARRIED TO COLLECTION				
4	**FIRE PROTECTION**				
	FIRE PROTECTION TOTAL CARRIED TO COLLECTION				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**SANITARY FIXTURES**				
5.2	**W.C. For Non Kids** 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 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)				
5.2.1	EWC-01 (Wall Hang - 52 x 36 cm) ***Rate or Lump Sum in Words:***	№			
5.2.3a New Item	EWC Accessories (Seat Cover - Flush Tank Cover / Push Button Etc…) ***Rate or Lump Sum in Words:***	№			
5.4	**Lavatories for Non Kids** Supply and install semi pedestal wash basin similar to Ideal Standard No. 742001 or approved equal 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) ***Rate or Lump Sum in Words:***	№			
5.4.2	LAV-02 (wall hang, handicapped with mixers 56 x 41 cm) ***Rate or Lump Sum in Words:***	№			
5.4.3a	LAV accessories (Traps - Mixers - Fixation, Etc…) ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5.5	**Urinal** Supply and installation of high quality urinal units complete with proper wall fixation with anti-dust materials including drainage & water supply connection as per the approved shop drawings. Cost to include all necessary accessories, valves, sensors to provide workable system.				
5.5.1	Urinal ***Rate or Lump Sum in Words:***	№			
5.6	**Self Close Taps on Kids & Students Lavatories** Supply and install self close taps to be fixed in the lavatory body as manufactured by Grohe Item No. 36-173 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 ***Rate or Lump Sum in Words:***	№			
5.7	**Wall Type Self Close Taps on Drinking Basins** Supply and install self close taps to be fixed in the drinking basin body as manufactured by Grohe Item No. 36-176 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 ***Rate or Lump Sum in Words:***	№			
5.8	**Kitchen Sink Accessories** Supply and install kitchen sink accessories such as chrome trap, angle valve, mixers as specified				
5.8.1	Kitchen Sink Accessories ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5.10	**Lavatories Resin Accessories** Supply and install lavatories resin accessories such as chrome trap, angle valves as specified				
5.10.1	Lavatories Resin Accessories ***Rate or Lump Sum in Words:***	№			
5.14	**Hose Bib** Supply and install Hose Bib taps including water connection & all necessary accessories as required				
5.14.1	HB - 01 ***Rate or Lump Sum in Words:***	№			
5.14.2a New Item	Maintenace of Potable Water System Contractor shall ensure proper functionality of the system ***Rate or Lump Sum in Words:***	Item			
5.14.3a New Item	Rehabilitation of existing septic tank, including cleaning, crack and joint sealing, waterproofing, replacement of damaged fittings, and all necessary works to restore watertightness and proper operation ***Rate or Lump Sum in Words:***	Item			
	SANITARY FIXTURES **TOTAL CARRIED TO COLLECTION**				

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3.2	SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION	.....
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3.4	FIRE PROTECTION	.....
3.5	SANITARY FIXTURES	.....
	Total Carried to General Summary	.....

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Bill № 4: Electrical Engineering Services



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**BASIC ELECTRICAL REQUIREMENTS** 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	**Fixing and Repairing** 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 ***Rate or Lump Sum in Words:***	LS	1		
1.1.2	Wires and cables ***Rate or Lump Sum in Words:***	LS			
1.1.3	Sockets and switches ***Rate or Lump Sum in Words:***	LS	1		
1.1.4	Circuit breakers ***Rate or Lump Sum in Words:***	LS			
1.1.5	Disconnecting switches ***Rate or Lump Sum in Words:***	LS			
	BASIC ELECTRICAL REQUIREMENTS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**PANELBOARDS**				
2.2	**Computer Lab Panel Board (Rehabilitation)**				
2.2.1	Rehabilitate and install the Computer Lab Panel Board, works to include: - Rehabilitation and connection - Wires installation - Accessories - All Accessories Failed Complete to shop drawings and to the satisfaction of the engineer (ready to use) ***Rate or Lump Sum in Words:***	№			
2.3a New Item	Supply and Install New Panel Board Cover ***Rate or Lump Sum in Words:***	№			
	PANELBOARDS **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**GENERAL LIGHTING INSTALLATIONS**				
3.1	**Lighting Fixtures** 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 φ ≥ 0.9 ***Rate or Lump Sum in Words:***	№			
3.1.2	Replace existing lighting fixtures with C1 ***Rate or Lump Sum in Words:***	№			
3.1.3	TYPE C2: as same as TYPE C1 but Pendent mounted ***Rate or Lump Sum in Words:***	№			
3.1.4	TYPE A2 / A3: 600x600 mm LED Panel 3600lm, 33W, 4000K, 80CRI surface-mount/recessed, die-cast aluminum, IP20 ***Rate or Lump Sum in Words:***	№			
3.1.5	TYPE A1: as same as TYPE A2 but Pendent mounted ***Rate or Lump Sum in Words:***	№			
3.1.6	TYPE N4 / N3: LED - 900lm - 12.5W - 3000K - 80CRI - WW Surface mounted / Recessed Downlight Round - 120 deg ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3.1.7	TYPE F: PLAFONIERA OVAL Wall mounted - IP54 Aluminum die-cast housing IK 06 - CLASS I Lamp SHOULD BE LED 900Lm, 4000K, 17W. ***Rate or Lump Sum in Words:***	№			
3.1.8	TYPE W: A++ / COB LED 3000K 230V CRI 90 - 3955lm - 42W IP65 - IK07 - Die-cast EN AB-47100 aluminum housing with high corrosion resistance. ***Rate or Lump Sum in Words:***	№			
3.1.9	TYPE L (LED): OVAL 18W 516Lm IP54 IK06 FOR LIFT & TECHNICAL SHAFTS. Wall mounted luminaire Aluminum die cast housing in EN AB-47100 (low copper content) with high resistance against corrosion. IK 06 Sand blasted glass diffuser. Lamp fixed position. LOR 43% Isolation: CLASS I. Black (cod.09). Lamp not included. ***Rate or Lump Sum in Words:***	№			
3.1.10	Replace Existing lighting fixtures with TYPE L (LED) ***Rate or Lump Sum in Words:***	№			
3.1.11	TYPE M: LED - 1500lm - 17W - 4000K - 80CRI - Ceiling mounted - With Motion Sensor. ***Rate or Lump Sum in Words:***	№			
3.1.12	Replace Existing lighting fixtures with TYPE M ***Rate or Lump Sum in Words:***	№			
3.1.13	TYPE EM: Ceiling Emergency Ceiling mounted non-maintained 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65. ***Rate or Lump Sum in Words:***	№			



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3.1.14	Replace Existing EM with LED Emergency ***Rate or Lump Sum in Words:***	№			
3.1.15	TYPE EM: Wall Emergency Wall mounted non-maintained, 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65. ***Rate or Lump Sum in Words:***	№			
3.1.16	TYPE EX: Exit sign LED light wall/ceiling mounted maintained, 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65 with engraved letters on fixtures ***Rate or Lump Sum in Words:***	№			
3.1.17	Replace Existing Exit with LED Exits ***Rate or Lump Sum in Words:***	№			
3.1.18	TYPE H: High Bay LED Lightning fixture pendent 100W, 220V, 50Hz. ***Rate or Lump Sum in Words:***	№			
	GENERAL LIGHTING INSTALLATIONS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
4	**FIRE ALARM SYSTEM**				
	FIRE ALARM SYSTEM **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**DATA SYSTEM**				
	DATA SYSTEM **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
6	**UNINTERRUPTIBLE POWER SUPPLY (UPS)**				
	UNINTERRUPTIBLE POWER SUPPLY (UPS) TOTAL CARRIED TO COLLECTION				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
7	**CCTV SYSTEM** Supply, install, connect and test CCTV system complete with conduits installations from the location of the NVR through the different CCTV camera outlets, including the pull or draw boxes and derivation boxes, the junction and outlet boxes, 19" Rack, and all necessary connections to the management station as shown on drawings as per Tender Specifications and the like to the satisfaction of the supervision engineer.				
7.3a New Item	Replace existing Cameras by new one Similar to existing ***Rate or Lump Sum in Words:***	№			
	CCTV SYSTEM **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8	**SOLAR SYSTEM**				
8.1	Supply, install, connect and test the solar lighting system for all Electrical Loads (excluding Lifts, Pumps and AC Units) in perfect operating conditions, including but not limited to: - Photovoltaic multi-crystalline solar panels as shown on the drawings. - Hybrid Inverter - All cables, wires, conduits and all necessary accessories - Aluminum PV mountings - The Contractor shall ensure complete solar system which should function as the main Power Supply - The Contractor should submit detailed shop drawings and materials for approval. - For all blocks of the schools - Lithium Batteries for (Off-Grid Solar Types) - All necessary elevated structures on roof and other areas which are needed to install the required solar panel as mentioned on drawings (Sheds, Parking, etc.) areas ***Rate or Lump Sum in Words:***	LS			
8.1.2a	Replace Unfuctional Battery by new one similar to existing				
8.1.2.1a	Deye BOS-G 51.2 kWh High-Voltage $LiFePO_4$ Battery Energy Storage System – Complete Supply, Installation, Testing & Commissioning ***Rate or Lump Sum in Words:***	№			
8.1.2.1b	Deye BOS-GM5.1 HV $LiFePO_4$ Battery, 51.2 V, 100 Ah, 5.12 kWh, including installation, testing and commissioning ***Rate or Lump Sum in Words:***	№			
8.1.2.1c	Acid Battery, 12 V, 250 Ah ***Rate or Lump Sum in Words:***	№			
	SOLAR SYSTEM **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9	**BELL SYSTEM**				
	BELL SYSTEM **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10	**LIFTS REHABILITATION**				
10.1	Rehabilitation of the 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: 650kg Speed: 1.5mps Entrance size/ type: 1100 mm wide single speed center opening ***Rate or Lump Sum in Words:***	№			
	LIFTS REHABILITATION **TOTAL CARRIED TO COLLECTION**				

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General Summary
840-Bouarej Mixed Intermediate Public School



General Summary

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Bill № 2: Civil and Architectural Works



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**SITE PREPARATION AND DEMOLITION**				
1.1	**Demolishing and Removal of Debris**				
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. ***Rate or Lump Sum in Words:***	LS	1		
1.1a New Item	**Dismantling** The works include the dismantling works related to the newly installed water tanks and prefabricated units. - The contractor shall deliver the dismantled items to the Building administration / MEHE. ***Rate or Lump Sum in Words:***				
1.1.1.a New Item	Water Tanks ***Rate or Lump Sum in Words:***	№	1		
1.1.1.b New Item	Prefabricated Units ***Rate or Lump Sum in Words:***	№	2		
1.1.1.c New Item	Partitions of any type ***Rate or Lump Sum in Words:***	m2	45		
	SITE PREPARATION AND DEMOLITION **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**EXTERNAL WORKS**				
2.4 2.4.2	**School Fences with Related Gates** Rehabilitate Existing Fence (Strengthening & Rehabilitation) Work to include - Rehabilitate and support all the existing fence as per drawings - Determine the places that requires support - Preparation of shop drawings - Replace all broken elements - Redo all damaged elements and to be similar to existing elements - Finishing works as existing (plastering, paints, stone cladding, etc.) - Rehabilitate existing steel protection (Replace all damaged part by new similar to existing and paint with epoxy as specified) - Replace existing chain link by new one (Galvanized) - Reconstruct the broken and damaged parts and rehabilitate as it was with all similar materials including steel parts with related epoxy paint as per the engineer instructions ***Rate or Lump Sum in Words:***	m			
2.5 2.5.1	**Ramp for External Existing Sidewalk** 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 ***Rate or Lump Sum in Words:***	LS			
	EXTERNAL WORKS **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**CONCRETE** **Not Applicable**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
4	**MASONRY**				
	SITE PREPARATION AND DEMOLITION TOTAL CARRIED TO COLLECTION				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**METAL WORKS**				
5.1	**Provide New Steel Work (Door & Windows)**				
5.1.3	Provide new double glazed aluminum windows with new burglar proof protection ***Rate or Lump Sum in Words:***	№	3		
5.2	**Rehabilitate and Maintain the Existing Steel Work (Burglar Proof Protection + Opening)** 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 ***Rate or Lump Sum in Words:***	№			
5.2.7b New Item	Rehabilitate existing steel doors work to include all door accessories such as lock, handle and all necessary accessories. ***Rate or Lump Sum in Words:***	№			
5.5a New Item	**Steel Handrail** - Provide new metal handrail similar to exist with all all necessary accessories - Apply one layer of epoxy base paint - Apply putty - Apply epoxy paint as per specification All needed items as per the Engineer instructions				
5.5.1a New Item	Above Parapet ***Rate or Lump Sum in Words:***	m	60		
	METAL WORKS **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
6	**WOOD AND PLASTICS**				
6.1	**Joinery Works**				
6.1.1	**Rehabilitate Existing Kitchen Cupboards** 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 ***Rate or Lump Sum in Words:***	m			
6.1.2	**Rehabilitate Timber Cupboard** Rehabilitate timber cupboards with plastic laminate color, work to include sub framing, drawer units, shelves, fixing and fastening hardware, heavy duty ironmongery, accessories, including finish, soft close, painting and all other related auxiliaries works as required by engineer - 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. - (No patching is allowed for existing wooden works) ***Rate or Lump Sum in Words:***	m^2			
	WOOD AND PLASTICS **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
7	**THERMAL AND MOISTURE PROTECTION**				
7.0	**Preliminaries**				
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 ***Rate or Lump Sum in Words:***	LS			
7.1 7.1.1	**Roof Waterproofing** 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 & debris - 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/m³ where required - Provide Geotextile layers - Provide all aluminum flashing with mastic - Provide finishing material as required - All as specified and approved shop drawings ***Rate or Lump Sum in Words:***	m²			
	THERMAL AND MOISTURE PROTECTION **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8	**DOOR AND WINDOWS**				
8.1	**Wooden Doors and Windows** 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	**Timber Doors** 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				
8.1.1.2	Provide new single leaf wooden door with view frame ***Rate or Lump Sum in Words:***	№	2		
8.1.1.5	Provide new toilet doors with related accessories as per specifications ***Rate or Lump Sum in Words:***	№			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.1.3	**Rehabilitate the Existing Timber Doors** 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.				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.1.3.1.1	Rehabilitate and paint existing single leaf timber doors with related accessories ***Rate or Lump Sum in Words:***	№	3		
8.1.3.1.5a New Item	Supply and install wooden doors accessories (Handle - Lock - Etc…) ***Rate or Lump Sum in Words:***	№	20		
8.1.3.1.6a New Item	Replace broken glass of the wooden door view access window ***Rate or Lump Sum in Words:***	№	2		

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.2	**Aluminum Doors and Windows** 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	**New Aluminum Panels (Double Glass)** Supply and install the fabricated aluminum panels with double glass (6 - 12 - 6 mm) (Outer Glass should be Tempered)				
8.2.1.1	Provide new aluminum double glazed window & door panel ***Rate or Lump Sum in Words:***	№			
8.2.1.4	Replace existing elements by new single glazed aluminum windows (6mm) if the quantity of broken glass does not exceed 30% of whole building ***Rate or Lump Sum in Words:***	№			
8.2.2	**New Aluminum Internal Door** 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. ***Rate or Lump Sum in Words:***	№	1		
8.2.2.2	Provide new single glazed aluminum partition double leaf door ***Rate or Lump Sum in Words:***	№	1		

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
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 ***Rate or Lump Sum in Words:***	№	45		
8.2.3.1a New Item	Rehabilitate existing Doors ***Rate or Lump Sum in Words:***	№	24		
8.2.3.2a New Item	Rehabilitate existing aluminum Doors / Windows with all related accessories without Glass ***Rate or Lump Sum in Words:***	№			
	DOOR AND WINDOWS **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9	**FINISHES**				
9.1	**Cement Plaster** 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 9.1.1.1	**Internal and External Plaster Works** 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. ***Rate or Lump Sum in Words:***	m^2			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.1.2	**Repair of Existing Plaster (Internal - External) (Cracks, etc.)**				
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. Fill 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			



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2	**Tiling Works (Similar to existing)** 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				
9.2.2 9.2.2.1	**New Glazed Colored Ceramic for Walls** Supply and install glazed colored ceramic for walls Include Ceramic Corner (first choice) ***Rate or Lump Sum in Words:***	m^2			
9.2.4 9.2.4.1	**Repair existing broken floor tiles and skirting (all types) and reinstall by new, similar to existing for all rooms and corridors** 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. ***Rate or Lump Sum in Words:***	LS			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2.4a New Item	**<u>Repair existing broken tiles (all types) and reinstall by new, similar to existing for toilets, drinking Basin and kitchen</u>**				
9.2.4.1a New Item	Rehabilitate and repair all damaged and broken tiles, 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. ***Rate or Lump Sum in Words:***	m^2			
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				
9.2.7.2	Type 2: Ceramic ***Rate or Lump Sum in Words:***	m^2			
9.2.7.3	Type 3: Mosaic ***Rate or Lump Sum in Words:***	m^2			
9.2.7.5	Type 5: Skirting (any type and size) ***Rate or Lump Sum in Words:***	m			
9.2.7.8a New Item	Type 8: Terrazzo ***Rate or Lump Sum in Words:***	m^2			
9.2.7.10a New Item	Type 10: Dismantling of the existing Faux parquet, Rehabilitate, Clean and Rub the Existing any type of flooring tiles and skirting ***Rate or Lump Sum in Words:***	m^2			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2.8	**<u>Clean the Existing Decorative Wall Tiles</u>** Rehabilitate any type of decorative wall tiles (mosaic - marble - etc.) Work to include: - All materials and labors - Grouting - Polish and rubbing - All needed items as per the Engineer instruction. - Works to be executed by experts				
9.2.8.4	Type 4: Terrazzo ***Rate or Lump Sum in Words:***	m²			
9.2.9	**<u>Colored PVC for Covered Indoor KG Playgrounds</u>** Supply and install first class safe and antibacterial colored P.V.C. flooring for indoor KG playgrounds at least 6mm thick (Design shape and colors of vinyl flooring should be approved by engineer prior to installation) Work to include: - Shop drawing for design, shape and colors of vinyl flooring should be submitted for each classroom separately for engineer approval - Laminate existing finish flooring after removing vinyl by special concrete material level - Make good and smooth the flooring - Apply self leveling special materials(if needed) to assume Vinyl best finishing - Remove all the existing skirting - Treat the place of the existing skirting - Place the special glue as specified - Place the flooring and screw the skirting P.V.C. profile Labors and materials, screw, etc. All needed items as per the Engineer instructions and approval. <u>Note</u>: Work should be executed by experts and should be executed in presence and approval of supervision engineer and as per required specifications for materials and executions. ***Rate or Lump Sum in Words:***	m²			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.3	**Suspended Ceilings (Similar to existing)** 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 specifications - 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	**Metal Sheet Strips Suspended Ceilings:**				
9.3.1.2	60 x 60 cm Aluminum Suspended Ceiling ***Rate or Lump Sum in Words:***	m²	25		
9.4	**Gypsum Works (Similar to existing)**				
9.4.2	**Rehabilitate Existing Gypsum Suspended Ceiling (Tiles, Panels)**				
9.4.2.1	Rehabilitate existing gypsum board suspended ceiling n the case of damage or during construction. Works to include material, labor, equipment, etc. and to the engineer's approval ***Rate or Lump Sum in Words:***	m²			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.5	**Painting**				
9.5.1	**Wall and Ceilings Paint Works** 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, ***All paint types must be lead-free and Low VOC (Volatile Organic Compounds)***				
9.5.1.1	Super Rubber Paint for new walls and ceilings ***Rate or Lump Sum in Words:***	m^2			
9.5.1.2	Super Rubber Paint for old walls and ceilings ***Rate or Lump Sum in Words:***	m^2			
9.5.1.3	Oil Paint for new walls and ceilings ***Rate or Lump Sum in Words:***	m^2			
9.5.1.4	Oil Paints for old walls and ceilings ***Rate or Lump Sum in Words:***	m^2			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.5.2 9.5.2.1	**<u>Outside Walls Paint (Old and New Walls and Ceilings)</u>** 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. ***Rate or Lump Sum in Words:***	m^2			
9.5.6	**<u>Epoxy coating (Playground -covered indoor Car Parking)</u>**				
9.5.6.5a New Item	For Roof ***Rate or Lump Sum in Words:***	m^2			
	FINISHES **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10	**SPECIALTIES**				
10.1	**Bathrooms Accessories** - 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				
10.1.1 10.1.1.1	**Paper Roller Holder** Supply and install paper holder no rust, no stain stainless steel 316 with all accessories and fixation (anti-rust materials) for good quality and at the places shown on drawings All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	№	1		
10.1.2 10.1.2.1	**Soap Dispenser** Supply and install stainless steel 316 no rust, no stain, soap dispenser wall type fixation (anti-rust materials and accessories) with all needed items All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	№	2		
10.1.3 10.1.3.1	**Paper Holder Box** Supply and install paper holder box from stainless steel 316 no rust, no stain, with all needed works and fixation (anti-rust materials and accessories) The box should be from a good manufacturer All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	№	1		
10.1.4	**Mirror for Lavatories** 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 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) ***Rate or Lump Sum in Words:***	№	10		

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10.1.5	**<u>Handicapped Bathroom Accessories</u>** - Remove and cart away old damaged fixtures Supply and install all needed bars for the handicapped toilet of stainless steel 316 Work to include: - Materials - Labors - and all needed items as per the Engineer instructions				
10.1.5.1	Supply and install vertical grab rail 60cm bars ***Rate or Lump Sum in Words:***	№			
10.1.5.2	Supply and install Horizontal grab rail 60cm bars ***Rate or Lump Sum in Words:***	№			
10.1.5.3	Supply and install Drop Down Rail removable arm 80cm ***Rate or Lump Sum in Words:***	№			
10.1.5.4	Alarm pull cord for emergency ***Rate or Lump Sum in Words:***	№			
10.1.5.5a New Item	Supply and install partition between urinals similar to existing with all needed fixation accessories ***Rate or Lump Sum in Words:***	№			
10.2	**Classroom Specialties**				
10.2.1 10.2.1.1	**<u>White Teaching Boards</u>** Supply and install White teaching boards from approved manufacturer as per specifications of Ministry of Education and Higher Education and corresponding to the site Cost to include: - (3600mm x 1200mm) final dimensions as per site limitation - Materials and labors - Felt marker pens and eraser (12 marker pens + 2 erases for each white board) - Stainless Steel screws - Remove the existing board - All needed works as per the Engineer instructions ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10.3	**Resin Work**				
10.3.1	**Drinking Basin** 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) ***Rate or Lump Sum in Words:***	№			
10.3.1.7a New Item	Rehabilitation of existing Drinking Basin - Any Length (Traps, Taps, Cleaning and repair of any damaged elements) ***Rate or Lump Sum in Words:***	№			
10.3.4	**Kitchen Counter** 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				
10.3.4.3	Kitchen Counter - Length (1.76 to 2.05 m) ***Rate or Lump Sum in Words:***	№			
10.5	**Internal Curtains** Supply and install internal rolling type tissue and polyester collapsible type curtain as per specifications and at the location as shown on drawings Works to include: - Materials - Labors - Heavy Duty Accessories - All needed works as per the Engineer instructions and approval				
10.5.1	On External Opening ***Rate or Lump Sum in Words:***	m²	20		
	SPECIALTIES **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
11	**EQUIPMENT**				
	EQUIPMENT **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
12	**FURNISHINGS**				
12.1	**INSTITUTIONAL FURNITURE** Supply and install the following institutional furniture complete including all necessary fixing and accessories, all as specified, shown on the drawings and to the satisfaction of the Engineer.				
12.1.1	**Classrooms Furniture**				
12.1.1.1	Standard desk with chair for classroom, single seat. ***Rate or Lump Sum in Words:***	№			
12.1.2	**Conference Room Furniture**				
12.1.2.1	Standard table. ***Rate or Lump Sum in Words:***	№	22		
12.1.2.2	Standard chairs. ***Rate or Lump Sum in Words:***	№	16		
12.1.6 12.1.6.1	**Hooks with Rails for Hats and Coats** Hooks with rails for hats and coats, rail size 120mm high x 20mm thick, softwood, treated and painted, countersunk screwed to wall & painted steel hooks every 200 mm (5№ hooks per linear meter of rail). ***Rate or Lump Sum in Words:***	lm			
	FURNISHINGS **TOTAL CARRIED TO COLLECTION**				

Collection

Page №		Amount (US $)
2.1	SITE PREPARATION AND DEMOLITION	.....
2.2	EXTERNAL WORKS	.....
2.3	CONCRETE	.....
2.4	MASONRY	.....
2.5	METAL WORKS	.....
2.6	WOOD AND PLASTICS	.....
2.7	THERMAL AND MOISTURE PROTECTION	.....
2.8	DOOR AND WINDOWS	.....
2.9	FINISHES	.....
2.10	SPECIALTIES	.....
2.11	EQUIPMENT	.....
2.12	FURNISHINGS	.....
	Total Carried to General Summary	.....

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Bill № 3: Mechanical Engineering Services



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**GENERAL TECHNICAL REQUIREMENTS**				
1.1	**General Mechanical Requirements**				
1.1.1	Revise all Mechanical drawings and make sure that they can be executed properly. ***Rate or Lump Sum in Words:***	Item			
1.2	**Rehabilitation Works General Requirements** 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, floor drains, roof drains, manholes, pumps, WC tanks, adding where applicable all necessary valves, flush valves, etc., and all other necessary works. ***Rate or Lump Sum in Words:***	Item	1		
1.2.2	Maintenance and rehabilitation of existing HVAC & fire fighting systems, including all necessary piping, duct works, pumps and controls, fans, mechanical works inside shafts, air conditioning units, etc. ***Rate or Lump Sum in Words:***	Item			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1.2.3a New Item	Contractor Shall remove existing, newly added showers. Works to include - Removal of fixtures (Shower head or hand) - Replacement of damaged tiles by new one similar to existing. All other nessessary works (Finishes and mechanical works) ***Rate or Lump Sum in Words:***	№			
1.2.4a New Item	Contractor Shall remove existing, newly added Water Heater . Works to include - Removal of all pipes and accessories - Replacement of damaged tiles by new one similar to existing. All other nessessary works (Finishes and mechanical works) ***Rate or Lump Sum in Words:***	№			
	GENERAL TECHNICAL REQUIREMENTS **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION**				
2.3	**Drain Cover** Supply and install floor drain cover (P.E) 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 Engineer instructions				
2.3.1	Cover for FCO ***Rate or Lump Sum in Words:***	№			
	SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**WATER PIPE WORK INSTALLATION**				
3.2	**Electrical Water Heater** Electrical water heater as specified and scheduled; include pipe work connections, temperature and pressure gauges, control and power wiring from the MCC, hot water and pipe work connections, control and high limit control valves, isolation and safety valves, thermal insulation, valve boxes, bonding and identification, and the heater should be of a good trade mark of European or west made or first class Lebanese product.				
3.2.2	EWH-02 (100 L) ***Rate or Lump Sum in Words:***	№			
	WATER PIPE WORK INSTALLATION TOTAL CARRIED TO COLLECTION				
4	**FIRE PROTECTION**				
	FIRE PROTECTION TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**SANITARY FIXTURES**				
5.2	**W.C. For Non Kids** 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 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)				
5.2.1	EWC-01 (Wall Hang - 52 x 36 cm) ***Rate or Lump Sum in Words:***	№			
5.2.3a New Item	EWC Accessories (Seat Cover - Flush Tank Cover / Push Button Etc…) ***Rate or Lump Sum in Words:***	№	11		
5.4	**Lavatories for Non Kids** Supply and install semi pedestal wash basin similar to Ideal Standard No. 742001 or approved equal 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) ***Rate or Lump Sum in Words:***	№	4		
5.4.2	LAV-02 (wall hang, handicapped with mixers 56 x 41 cm) ***Rate or Lump Sum in Words:***	№			
5.4.3a	LAV accessories (Traps - Mixers - Fixation, Etc…) ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5.5	**Urinal** Supply and installation of high quality urinal units complete with proper wall fixation with anti-dust materials including drainage & water supply connection as per the approved shop drawings. Cost to include all necessary accessories, valves, sensors to provide workable system.				
5.5.1	Urinal ***Rate or Lump Sum in Words:***	№	7		
5.6	**Self Close Taps on Kids & Students Lavatories** Supply and install self close taps to be fixed in the lavatory body as manufactured by Grohe Item No. 36-173 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 ***Rate or Lump Sum in Words:***	№			
5.7	**Wall Type Self Close Taps on Drinking Basins** Supply and install self close taps to be fixed in the drinking basin body as manufactured by Grohe Item No. 36-176 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 ***Rate or Lump Sum in Words:***	№			
5.8	**Kitchen Sink Accessories** Supply and install kitchen sink accessories such as chrome trap, angle valve, mixers as specified				
5.8.1	Kitchen Sink Accessories ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5.10	**Lavatories Resin Accessories** Supply and install lavatories resin accessories such as chrome trap, angle valves as specified				
5.10.1	Lavatories Resin Accessories ***Rate or Lump Sum in Words:***	№			
5.14	**Hose Bib** Supply and install Hose Bib taps including water connection & all necessary accessories as required				
5.14.1	HB - 01 ***Rate or Lump Sum in Words:***	№	7		
5.14.2a New Item	Maintenace of Potable Water System Contractor shall ensure proper functionality of the system ***Rate or Lump Sum in Words:***	Item			
5.14.3a New Item	Rehabilitation of existing septic tank, including cleaning, crack and joint sealing, waterproofing, replacement of damaged fittings, and all necessary works to restore watertightness and proper operation ***Rate or Lump Sum in Words:***	Item			
	SANITARY FIXTURES **TOTAL CARRIED TO COLLECTION**				

Collection

Page №		Amount (US $)
3.1	GENERAL TECHNICAL REQUIREMENTS	.....
3.2	SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION	.....
3.3	WATER PIPE WORK INSTALLATION	.....
3.4	FIRE PROTECTION	.....
3.5	SANITARY FIXTURES	.....
	Total Carried to General Summary	.....

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Bill № 4: Electrical Engineering Services



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**BASIC ELECTRICAL REQUIREMENTS** 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	**Fixing and Repairing** 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 ***Rate or Lump Sum in Words:***	LS	1		
1.1.2	Wires and cables ***Rate or Lump Sum in Words:***	LS			
1.1.3	Sockets and switches ***Rate or Lump Sum in Words:***	LS	1		
1.1.4	Circuit breakers ***Rate or Lump Sum in Words:***	LS			
1.1.5	Disconnecting switches ***Rate or Lump Sum in Words:***	LS			
	BASIC ELECTRICAL REQUIREMENTS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**PANELBOARDS**				
2.2	**Computer Lab Panel Board (Rehabilitation)**				
2.2.1	Rehabilitate and install the Computer Lab Panel Board, works to include: - Rehabilitation and connection - Wires installation - Accessories - All Accessories Failed Complete to shop drawings and to the satisfaction of the engineer (ready to use) ***Rate or Lump Sum in Words:***	№			
2.3a New Item	Supply and Install New Panel Board Cover ***Rate or Lump Sum in Words:***	№			
	PANELBOARDS **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**GENERAL LIGHTING INSTALLATIONS**				
3.1	**Lighting Fixtures** 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 φ ≥ 0.9 ***Rate or Lump Sum in Words:***	№	5		
3.1.2	Replace existing lighting fixtures with C1 ***Rate or Lump Sum in Words:***	№			
3.1.3	TYPE C2: as same as TYPE C1 but Pendent mounted ***Rate or Lump Sum in Words:***	№			
3.1.4	TYPE A2 / A3: 600x600 mm LED Panel 3600lm, 33W, 4000K, 80CRI surface-mount/recessed, die-cast aluminum, IP20 ***Rate or Lump Sum in Words:***	№			
3.1.5	TYPE A1: as same as TYPE A2 but Pendent mounted ***Rate or Lump Sum in Words:***	№			
3.1.6	TYPE N4 / N3: LED - 900lm - 12.5W - 3000K - 80CRI - WW Surface mounted / Recessed Downlight Round - 120 deg ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3.1.7	TYPE F: PLAFONIERA OVAL Wall mounted - IP54 Aluminum die-cast housing IK 06 - CLASS I Lamp SHOULD BE LED 900Lm, 4000K, 17W. ***Rate or Lump Sum in Words:***	№			
3.1.8	TYPE W: A++ / COB LED 3000K 230V CRI 90 - 3955lm - 42W IP65 - IK07 - Die-cast EN AB-47100 aluminum housing with high corrosion resistance. ***Rate or Lump Sum in Words:***	№			
3.1.9	TYPE L (LED): OVAL 18W 516Lm IP54 IK06 FOR LIFT & TECHNICAL SHAFTS. Wall mounted luminaire Aluminum die cast housing in EN AB-47100 (low copper content) with high resistance against corrosion. IK 06 Sand blasted glass diffuser. Lamp fixed position. LOR 43% Isolation: CLASS I. Black (cod.09). Lamp not included. ***Rate or Lump Sum in Words:***	№			
3.1.10	Replace Existing lighting fixtures with TYPE L (LED) ***Rate or Lump Sum in Words:***	№			
3.1.11	TYPE M: LED - 1500lm - 17W - 4000K - 80CRI - Ceiling mounted - With Motion Sensor. ***Rate or Lump Sum in Words:***	№			
3.1.12	Replace Existing lighting fixtures with TYPE M ***Rate or Lump Sum in Words:***	№			
3.1.13	TYPE EM: Ceiling Emergency Ceiling mounted non-maintained 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65. ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3.1.14	Replace Existing EM with LED Emergency ***Rate or Lump Sum in Words:***	№			
3.1.15	TYPE EM: Wall Emergency Wall mounted non-maintained, 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65. ***Rate or Lump Sum in Words:***	№			
3.1.16	TYPE EX: Exit sign LED light wall/ceiling mounted maintained, 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65 with engraved letters on fixtures ***Rate or Lump Sum in Words:***	№			
3.1.17	Replace Existing Exit with LED Exits ***Rate or Lump Sum in Words:***	№			
3.1.18	TYPE H: High Bay LED Lightning fixture pendent 100W, 220V, 50Hz. ***Rate or Lump Sum in Words:***	№			
	GENERAL LIGHTING INSTALLATIONS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
4	**FIRE ALARM SYSTEM**				
	FIRE ALARM SYSTEM **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**DATA SYSTEM**				
	DATA SYSTEM **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
6	**UNINTERRUPTIBLE POWER SUPPLY (UPS)**				
	UNINTERRUPTIBLE POWER SUPPLY (UPS) TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
7	**CCTV SYSTEM** Supply, install, connect and test CCTV system complete with conduits installations from the location of the NVR through the different CCTV camera outlets, including the pull or draw boxes and derivation boxes, the junction and outlet boxes, 19" Rack, and all necessary connections to the management station as shown on drawings as per Tender Specifications and the like to the satisfaction of the supervision engineer.				
7.3a New Item	Replace existing Cameras by new one Similar to existing ***Rate or Lump Sum in Words:***	№			
	CCTV SYSTEM **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8	**SOLAR SYSTEM**				
8.1	Supply, install, connect and test the solar lighting system for all Electrical Loads (excluding Lifts, Pumps and AC Units) in perfect operating conditions, including but not limited to: - Photovoltaic multi-crystalline solar panels as shown on the drawings. - Hybrid Inverter - All cables, wires, conduits and all necessary accessories - Aluminum PV mountings - The Contractor shall ensure complete solar system which should function as the main Power Supply - The Contractor should submit detailed shop drawings and materials for approval. - For all blocks of the schools - Lithium Batteries for (Off-Grid Solar Types) - All necessary elevated structures on roof and other areas which are needed to install the required solar panel as mentioned on drawings (Sheds, Parking, etc.) areas ***Rate or Lump Sum in Words:***	LS			
8.1.2a	Replace Unfuctional Battery by new one similar to existing				
8.1.2.1a	Deye BOS-G 51.2 kWh High-Voltage $LiFePO_4$ Battery Energy Storage System – Complete Supply, Installation, Testing & Commissioning ***Rate or Lump Sum in Words:***	№			
8.1.2.1b	Deye BOS-GM5.1 HV $LiFePO_4$ Battery, 51.2 V, 100 Ah, 5.12 kWh, including installation, testing and commissioning ***Rate or Lump Sum in Words:***	№			
8.1.2.1c	Acid Battery, 12 V, 250 Ah ***Rate or Lump Sum in Words:***	№			
	SOLAR SYSTEM **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9	**BELL SYSTEM**				
	BELL SYSTEM **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10	**LIFTS REHABILITATION**				
10.1	Rehabilitation of the 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: 650kg Speed: 1.5mps Entrance size/ type: 1100 mm wide single speed center opening ***Rate or Lump Sum in Words:***	№			
	LIFTS REHABILITATION **TOTAL CARRIED TO COLLECTION**				

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Page №		Amount (US $)
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4.10	LIFTS REHABILITATION	.....
	Total Carried to General Summary	.....

General Summary
980-Al Mansora Intermediate Public School



General Summary

Description	Amount (US $)
Bill № 2: Civil and Architectural Works ……	
Bill № 3: Mechanical Engineering Services ……	
Bill № 4: 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:

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Bill № 2: Civil and Architectural Works

Bill № 3: Mechanical Engineering Services

Bill № 4: Electrical Engineering Services

General Summary

Bill № 2: Civil and Architectural Works



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**SITE PREPARATION AND DEMOLITION**				
1.1	**Demolishing and Removal of Debris**				
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. ***Rate or Lump Sum in Words:***	LS	1		
1.1a New Item	**Dismantling** The works include the dismantling works related to the newly installed water tanks and prefabricated units. - The contractor shall deliver the dismantled items to the Building administration / MEHE. ***Rate or Lump Sum in Words:***				
1.1.1.a New Item	Water Tanks ***Rate or Lump Sum in Words:***	№			
1.1.1.b New Item	Prefabricated Units ***Rate or Lump Sum in Words:***	№	8		
1.1.1.c New Item	Partitions of any type ***Rate or Lump Sum in Words:***	m2			
	SITE PREPARATION AND DEMOLITION **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**EXTERNAL WORKS**				
2.4 2.4.2	**School Fences with Related Gates** Rehabilitate Existing Fence (Strengthening & Rehabilitation) Work to include - Rehabilitate and support all the existing fence as per drawings - Determine the places that requires support - Preparation of shop drawings - Replace all broken elements - Redo all damaged elements and to be similar to existing elements - Finishing works as existing (plastering, paints, stone cladding, etc.) - Rehabilitate existing steel protection (Replace all damaged part by new similar to existing and paint with epoxy as specified) - Replace existing chain link by new one (Galvanized) - Reconstruct the broken and damaged parts and rehabilitate as it was with all similar materials including steel parts with related epoxy paint as per the engineer instructions ***Rate or Lump Sum in Words:***	m			
2.5 2.5.1	**Ramp for External Existing Sidewalk** 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 ***Rate or Lump Sum in Words:***	LS			
	EXTERNAL WORKS **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**CONCRETE** **Not Applicable**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
4	**MASONRY**				
	SITE PREPARATION AND DEMOLITION **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**METAL WORKS**				
5.1	**Provide New Steel Work (Door & Windows)**				
5.1.3	Provide new double glazed aluminum windows with new burglar proof protection ***Rate or Lump Sum in Words:***	№			
5.2	**Rehabilitate and Maintain the Existing Steel Work (Burglar Proof Protection + Opening)** 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 ***Rate or Lump Sum in Words:***	№			
5.2.7b New Item	Rehabilitate existing steel doors work to include all door accessories such as lock, handle and all necessary accessories. ***Rate or Lump Sum in Words:***	№			
5.5a New Item	**Steel Handrail** - Provide new metal handrail similar to exist with all all necessary accessories - Apply one layer of epoxy base paint - Apply putty - Apply epoxy paint as per specification All needed items as per the Engineer instructions				
5.5.1a New Item	Above Parapet ***Rate or Lump Sum in Words:***	m			
	METAL WORKS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
6	**WOOD AND PLASTICS**				
6.1	**Joinery Works**				
6.1.1	**Rehabilitate Existing Kitchen Cupboards** 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 ***Rate or Lump Sum in Words:***	m			
6.1.2	**Rehabilitate Timber Cupboard** Rehabilitate timber cupboards with plastic laminate color, work to include sub framing, drawer units, shelves, fixing and fastening hardware, heavy duty ironmongery, accessories, including finish, soft close, painting and all other related auxiliaries works as required by engineer - 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. - (No patching is allowed for existing wooden works) ***Rate or Lump Sum in Words:***	m^2			
	WOOD AND PLASTICS **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
7	**THERMAL AND MOISTURE PROTECTION**				
7.0	**Preliminaries**				
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 ***Rate or Lump Sum in Words:***	LS			
7.1 7.1.1	**Roof Waterproofing** 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 & debris - 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/m³ where required - Provide Geotextile layers - Provide all aluminum flashing with mastic - Provide finishing material as required - All as specified and approved shop drawings ***Rate or Lump Sum in Words:***	m²			
	THERMAL AND MOISTURE PROTECTION **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8	**DOOR AND WINDOWS**				
8.1	**Wooden Doors and Windows** 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	**Timber Doors** 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				
8.1.1.2	Provide new single leaf wooden door with view frame ***Rate or Lump Sum in Words:***	№			
8.1.1.5	Provide new toilet doors with related accessories as per specifications ***Rate or Lump Sum in Words:***	№			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.1.3	**Rehabilitate the Existing Timber Doors** 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.				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.1.3.1.1	Rehabilitate and paint existing single leaf timber doors with related accessories ***Rate or Lump Sum in Words:***	№			
8.1.3.1.5a New Item	Supply and install wooden doors accessories (Handle - Lock - Etc…) ***Rate or Lump Sum in Words:***	№			
8.1.3.1.6a New Item	Replace broken glass of the wooden door view access window ***Rate or Lump Sum in Words:***	№	2		

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.2	**Aluminum Doors and Windows** 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	**New Aluminum Panels (Double Glass)** Supply and install the fabricated aluminum panels with double glass (6 - 12 - 6 mm) (Outer Glass should be Tempered)				
8.2.1.1	Provide new aluminum double glazed window & door panel ***Rate or Lump Sum in Words:***	№			
8.2.1.4	Replace existing elements by new single glazed aluminum windows (6mm) if the quantity of broken glass does not exceed 30% of whole building ***Rate or Lump Sum in Words:***	№			
8.2.2	**New Aluminum Internal Door** 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. ***Rate or Lump Sum in Words:***	№			
8.2.2.2	Provide new single glazed aluminum partition double leaf door ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
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 ***Rate or Lump Sum in Words:***	№			
8.2.3.1a New Item	Rehabilitate existing Doors ***Rate or Lump Sum in Words:***	№			
8.2.3.2a New Item	Rehabilitate existing aluminum Doors / Windows with all related accessories without Glass ***Rate or Lump Sum in Words:***	№			
	DOOR AND WINDOWS **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9	**FINISHES**				
9.1	**Cement Plaster** 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 9.1.1.1	**Internal and External Plaster Works** 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. ***Rate or Lump Sum in Words:***	m^2			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.1.2	**Repair of Existing Plaster (Internal - External) (Cracks, etc.)**				
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. Fill 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			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2	**Tiling Works (Similar to existing)** 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				
9.2.2 9.2.2.1	**New Glazed Colored Ceramic for Walls** Supply and install glazed colored ceramic for walls Include Ceramic Corner (first choice) ***Rate or Lump Sum in Words:***	m²			
9.2.4 9.2.4.1	**Repair existing broken floor tiles and skirting (all types) and reinstall by new, similar to existing for all rooms and corridors** 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. ***Rate or Lump Sum in Words:***	LS			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2.4a New Item	**<u>Repair existing broken tiles (all types) and reinstall by new, similar to existing for toilets, drinking Basin and kitchen</u>**				
9.2.4.1a New Item	Rehabilitate and repair all damaged and broken tiles, 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. ***Rate or Lump Sum in Words:***	m^2			
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				
9.2.7.2	Type 2: Ceramic ***Rate or Lump Sum in Words:***	m^2			
9.2.7.3	Type 3: Mosaic ***Rate or Lump Sum in Words:***	m^2			
9.2.7.5	Type 5: Skirting (any type and size) ***Rate or Lump Sum in Words:***	m			
9.2.7.8a New Item	Type 8: Terrazzo ***Rate or Lump Sum in Words:***	m^2			
9.2.7.10a New Item	Type 10: Dismantling of the existing Faux parquet, Rehabilitate, Clean and Rub the Existing any type of flooring tiles and skirting ***Rate or Lump Sum in Words:***	m^2			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2.8	**<u>Clean the Existing Decorative Wall Tiles</u>** Rehabilitate any type of decorative wall tiles (mosaic - marble - etc.) Work to include: - All materials and labors - Grouting - Polish and rubbing - All needed items as per the Engineer instruction. - Works to be executed by experts				
9.2.8.4	Type 4: Terrazzo ***Rate or Lump Sum in Words:***	m²			
9.2.9	**<u>Colored PVC for Covered Indoor KG Playgrounds</u>** Supply and install first class safe and antibacterial colored P.V.C. flooring for indoor KG playgrounds at least 6mm thick (Design shape and colors of vinyl flooring should be approved by engineer prior to installation) Work to include: - Shop drawing for design, shape and colors of vinyl flooring should be submitted for each classroom separately for engineer approval - Laminate existing finish flooring after removing vinyl by special concrete material level - Make good and smooth the flooring - Apply self leveling special materials(if needed) to assume Vinyl best finishing - Remove all the existing skirting - Treat the place of the existing skirting - Place the special glue as specified - Place the flooring and screw the skirting P.V.C. profile Labors and materials, screw, etc. All needed items as per the Engineer instructions and approval. <u>Note</u>: Work should be executed by experts and should be executed in presence and approval of supervision engineer and as per required specifications for materials and executions. ***Rate or Lump Sum in Words:***	m²			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.3	**Suspended Ceilings (Similar to existing)** 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 specifications - 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	**Metal Sheet Strips Suspended Ceilings:**				
9.3.1.2	60 x 60 cm Aluminum Suspended Ceiling ***Rate or Lump Sum in Words:***	m²			
9.4	**Gypsum Works (Similar to existing)**				
9.4.2	**Rehabilitate Existing Gypsum Suspended Ceiling (Tiles, Panels)**				
9.4.2.1	Rehabilitate existing gypsum board suspended ceiling n the case of damage or during construction. Works to include material, labor, equipment, etc. and to the engineer's approval ***Rate or Lump Sum in Words:***	m²			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.5	**Painting**				
9.5.1	**Wall and Ceilings Paint Works** 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, ***All paint types must be lead-free and Low VOC (Volatile Organic Compounds)***				
9.5.1.1	Super Rubber Paint for new walls and ceilings ***Rate or Lump Sum in Words:***	m^2			
9.5.1.2	Super Rubber Paint for old walls and ceilings ***Rate or Lump Sum in Words:***	m^2			
9.5.1.3	Oil Paint for new walls and ceilings ***Rate or Lump Sum in Words:***	m^2			
9.5.1.4	Oil Paints for old walls and ceilings ***Rate or Lump Sum in Words:***	m^2			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.5.2 9.5.2.1	**<u>Outside Walls Paint (Old and New Walls and Ceilings)</u>** 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. ***Rate or Lump Sum in Words:***	m²			
9.5.6	**<u>Epoxy coating (Playground -covered indoor Car Parking)</u>**				
9.5.6.5a New Item	For Roof ***Rate or Lump Sum in Words:***	m²			
	FINISHES **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10	**SPECIALTIES**				
10.1	**Bathrooms Accessories** - 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				
10.1.1 10.1.1.1	**Paper Roller Holder** Supply and install paper holder no rust, no stain stainless steel 316 with all accessories and fixation (anti-rust materials) for good quality and at the places shown on drawings All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	№ 	1 		
10.1.2 10.1.2.1	**Soap Dispenser** Supply and install stainless steel 316 no rust, no stain, soap dispenser wall type fixation (anti-rust materials and accessories) with all needed items All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	 №			
10.1.3 10.1.3.1	**Paper Holder Box** Supply and install paper holder box from stainless steel 316 no rust, no stain, with all needed works and fixation (anti-rust materials and accessories) The box should be from a good manufacturer All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	 №			
10.1.4	**Mirror for Lavatories** 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 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) ***Rate or Lump Sum in Words:***	 №			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10.1.5	**<u>Handicapped Bathroom Accessories</u>** - Remove and cart away old damaged fixtures Supply and install all needed bars for the handicapped toilet of stainless steel 316 Work to include: - Materials - Labors - and all needed items as per the Engineer instructions				
10.1.5.1	Supply and install vertical grab rail 60cm bars ***Rate or Lump Sum in Words:***	№			
10.1.5.2	Supply and install Horizontal grab rail 60cm bars ***Rate or Lump Sum in Words:***	№			
10.1.5.3	Supply and install Drop Down Rail removable arm 80cm ***Rate or Lump Sum in Words:***	№			
10.1.5.4	Alarm pull cord for emergency ***Rate or Lump Sum in Words:***	№			
10.1.5.5a New Item	Supply and install partition between urinals similar to existing with all needed fixation accessories ***Rate or Lump Sum in Words:***	№			
10.2	**Classroom Specialties**				
10.2.1 10.2.1.1	**<u>White Teaching Boards</u>** Supply and install White teaching boards from approved manufacturer as per specifications of Ministry of Education and Higher Education and corresponding to the site Cost to include: - (3600mm x 1200mm) final dimensions as per site limitation - Materials and labors - Felt marker pens and eraser (12 marker pens + 2 erases for each white board) - Stainless Steel screws - Remove the existing board - All needed works as per the Engineer instructions ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10.3	**Resin Work**				
10.3.1	**Drinking Basin** 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) ***Rate or Lump Sum in Words:***	№			
10.3.1.7a New Item	Rehabilitation of existing Drinking Basin - Any Length (Traps, Taps, Cleaning and repair of any damaged elements) ***Rate or Lump Sum in Words:***	№			
10.3.4	**Kitchen Counter** 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				
10.3.4.3	Kitchen Counter - Length (1.76 to 2.05 m) ***Rate or Lump Sum in Words:***	№			
10.5	**Internal Curtains** Supply and install internal rolling type tissue and polyester collapsible type curtain as per specifications and at the location as shown on drawings Works to include: - Materials - Labors - Heavy Duty Accessories - All needed works as per the Engineer instructions and approval				
10.5.1	On External Opening ***Rate or Lump Sum in Words:***	m²			
	SPECIALITIES **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
11	**EQUIPMENT**				
	EQUIPMENT **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
12	**FURNISHINGS**				
12.1	**INSTITUTIONAL FURNITURE** Supply and install the following institutional furniture complete including all necessary fixing and accessories, all as specified, shown on the drawings and to the satisfaction of the Engineer.				
12.1.1	**Classrooms Furniture**				
12.1.1.1	Standard desk with chair for classroom, single seat. ***Rate or Lump Sum in Words:***	№			
12.1.2	**Conference Room Furniture**				
12.1.2.1	Standard table. ***Rate or Lump Sum in Words:***	№			
12.1.2.2	Standard chairs. ***Rate or Lump Sum in Words:***	№			
12.1.6 12.1.6.1	**Hooks with Rails for Hats and Coats** Hooks with rails for hats and coats, rail size 120mm high x 20mm thick, softwood, treated and painted, countersunk screwed to wall & painted steel hooks every 200 mm (5№ hooks per linear meter of rail). ***Rate or Lump Sum in Words:***	lm			
	FURNISHINGS **TOTAL CARRIED TO COLLECTION**				

Collection

Page №		Amount (US $)
2.1	SITE PREPARATION AND DEMOLITION	.....
2.2	EXTERNAL WORKS	.....
2.3	CONCRETE	.....
2.4	MASONRY	.....
2.5	METAL WORKS	.....
2.6	WOOD AND PLASTICS	.....
2.7	THERMAL AND MOISTURE PROTECTION	.....
2.8	DOOR AND WINDOWS	.....
2.9	FINISHES	.....
2.10	SPECIALTIES	.....
2.11	EQUIPMENT	.....
2.12	FURNISHINGS	.....
	Total Carried to General Summary	.....



Bill № 3: Mechanical Engineering Services



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**GENERAL TECHNICAL REQUIREMENTS**				
1.1	**General Mechanical Requirements**				
1.1.1	Revise all Mechanical drawings and make sure that they can be executed properly. ***Rate or Lump Sum in Words:***	Item			
1.2	**Rehabilitation Works General Requirements** 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, floor drains, roof drains, manholes, pumps, WC tanks, adding where applicable all necessary valves, flush valves, etc., and all other necessary works. ***Rate or Lump Sum in Words:***	Item	1		
1.2.2	Maintenance and rehabilitation of existing HVAC & fire fighting systems, including all necessary piping, duct works, pumps and controls, fans, mechanical works inside shafts, air conditioning units, etc. ***Rate or Lump Sum in Words:***	Item			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1.2.3a New Item	Contractor Shall remove existing, newly added showers. Works to include - Removal of fixtures (Shower head or hand) - Replacement of damaged tiles by new one similar to existing. All other nessessary works (Finishes and mechanical works) ***Rate or Lump Sum in Words:***	№			
1.2.4a New Item	Contractor Shall remove existing, newly added Water Heater . Works to include - Removal of all pipes and accessories - Replacement of damaged tiles by new one similar to existing. All other nessessary works (Finishes and mechanical works) ***Rate or Lump Sum in Words:***	№			
	GENERAL TECHNICAL REQUIREMENTS **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION**				
2.3	**Drain Cover** Supply and install floor drain cover (P.E) 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 Engineer instructions				
2.3.1	Cover for FCO ***Rate or Lump Sum in Words:***	№	1		
	SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**WATER PIPE WORK INSTALLATION**				
3.2	**Electrical Water Heater** Electrical water heater as specified and scheduled; include pipe work connections, temperature and pressure gauges, control and power wiring from the MCC, hot water and pipe work connections, control and high limit control valves, isolation and safety valves, thermal insulation, valve boxes, bonding and identification, and the heater should be of a good trade mark of European or west made or first class Lebanese product.				
3.2.2	EWH-02 (100 L) ***Rate or Lump Sum in Words:***	№			
	WATER PIPE WORK INSTALLATION TOTAL CARRIED TO COLLECTION				
4	**FIRE PROTECTION**				
	FIRE PROTECTION TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**SANITARY FIXTURES**				
5.2	**W.C. For Non Kids** 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 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)				
5.2.1	EWC-01 (Wall Hang - 52 x 36 cm) ***Rate or Lump Sum in Words:***	№			
5.2.3a New Item	EWC Accessories (Seat Cover - Flush Tank Cover / Push Button Etc…) ***Rate or Lump Sum in Words:***	№	4		
5.4	**Lavatories for Non Kids** Supply and install semi pedestal wash basin similar to Ideal Standard No. 742001 or approved equal 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) ***Rate or Lump Sum in Words:***	№			
5.4.2	LAV-02 (wall hang, handicapped with mixers 56 x 41 cm) ***Rate or Lump Sum in Words:***	№			
5.4.3a	LAV accessories (Traps - Mixers - Fixation, Etc…) ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5.5	**Urinal** Supply and installation of high quality urinal units complete with proper wall fixation with anti-dust materials including drainage & water supply connection as per the approved shop drawings. Cost to include all necessary accessories, valves, sensors to provide workable system.				
5.5.1	Urinal ***Rate or Lump Sum in Words:***	№			
5.6	**Self Close Taps on Kids & Students Lavatories** Supply and install self close taps to be fixed in the lavatory body as manufactured by Grohe Item No. 36-173 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 ***Rate or Lump Sum in Words:***	№			
5.7	**Wall Type Self Close Taps on Drinking Basins** Supply and install self close taps to be fixed in the drinking basin body as manufactured by Grohe Item No. 36-176 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 ***Rate or Lump Sum in Words:***	№			
5.8	**Kitchen Sink Accessories** Supply and install kitchen sink accessories such as chrome trap, angle valve, mixers as specified				
5.8.1	Kitchen Sink Accessories ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5.10	**Lavatories Resin Accessories** Supply and install lavatories resin accessories such as chrome trap, angle valves as specified				
5.10.1	Lavatories Resin Accessories ***Rate or Lump Sum in Words:***	№			
5.14	**Hose Bib** Supply and install Hose Bib taps including water connection & all necessary accessories as required				
5.14.1	HB - 01 ***Rate or Lump Sum in Words:***	№	12		
5.14.2a New Item	Maintenace of Potable Water System Contractor shall ensure proper functionality of the system ***Rate or Lump Sum in Words:***	Item			
5.14.3a New Item	Rehabilitation of existing septic tank, including cleaning, crack and joint sealing, waterproofing, replacement of damaged fittings, and all necessary works to restore watertightness and proper operation ***Rate or Lump Sum in Words:***	Item			
	SANITARY FIXTURES **TOTAL CARRIED TO COLLECTION**				

Collection

Page №		Amount (US $)
3.1	GENERAL TECHNICAL REQUIREMENTS	.....
3.2	SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION	.....
3.3	WATER PIPE WORK INSTALLATION	.....
3.4	FIRE PROTECTION	.....
3.5	SANITARY FIXTURES	.....
	Total Carried to General Summary	.....

Bill № 4: Electrical Engineering Services



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**BASIC ELECTRICAL REQUIREMENTS** 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	**Fixing and Repairing** 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 ***Rate or Lump Sum in Words:***	LS	1		
1.1.2	Wires and cables ***Rate or Lump Sum in Words:***	LS			
1.1.3	Sockets and switches ***Rate or Lump Sum in Words:***	LS	1		
1.1.4	Circuit breakers ***Rate or Lump Sum in Words:***	LS			
1.1.5	Disconnecting switches ***Rate or Lump Sum in Words:***	LS			
	BASIC ELECTRICAL REQUIREMENTS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**PANELBOARDS**				
2.2	**Computer Lab Panel Board (Rehabilitation)**				
2.2.1	Rehabilitate and install the Computer Lab Panel Board, works to include: - Rehabilitation and connection - Wires installation - Accessories - All Accessories Failed Complete to shop drawings and to the satisfaction of the engineer (ready to use) ***Rate or Lump Sum in Words:***	№			
2.3a New Item	Supply and Install New Panel Board Cover ***Rate or Lump Sum in Words:***	№			
	PANELBOARDS **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**GENERAL LIGHTING INSTALLATIONS**				
3.1	**Lighting Fixtures** 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 φ ≥ 0.9 ***Rate or Lump Sum in Words:***	№	4		
3.1.2	Replace existing lighting fixtures with C1 ***Rate or Lump Sum in Words:***	№			
3.1.3	TYPE C2: as same as TYPE C1 but Pendent mounted ***Rate or Lump Sum in Words:***	№			
3.1.4	TYPE A2 / A3: 600x600 mm LED Panel 3600lm, 33W, 4000K, 80CRI surface-mount/recessed, die-cast aluminum, IP20 ***Rate or Lump Sum in Words:***	№			
3.1.5	TYPE A1: as same as TYPE A2 but Pendent mounted ***Rate or Lump Sum in Words:***	№			
3.1.6	TYPE N4 / N3: LED - 900lm - 12.5W - 3000K - 80CRI - WW Surface mounted / Recessed Downlight Round - 120 deg ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3.1.7	TYPE F: PLAFONIERA OVAL Wall mounted - IP54 Aluminum die-cast housing IK 06 - CLASS I Lamp SHOULD BE LED 900Lm, 4000K, 17W. ***Rate or Lump Sum in Words:***	№			
3.1.8	TYPE W: A++ / COB LED 3000K 230V CRI 90 - 3955lm - 42W IP65 - IK07 - Die-cast EN AB-47100 aluminum housing with high corrosion resistance. ***Rate or Lump Sum in Words:***	№			
3.1.9	TYPE L (LED): OVAL 18W 516Lm IP54 IK06 FOR LIFT & TECHNICAL SHAFTS. Wall mounted luminaire Aluminum die cast housing in EN AB-47100 (low copper content) with high resistance against corrosion. IK 06 Sand blasted glass diffuser. Lamp fixed position. LOR 43% Isolation: CLASS I. Black (cod.09). Lamp not included. ***Rate or Lump Sum in Words:***	№			
3.1.10	Replace Existing lighting fixtures with TYPE L (LED) ***Rate or Lump Sum in Words:***	№			
3.1.11	TYPE M: LED - 1500lm - 17W - 4000K - 80CRI - Ceiling mounted - With Motion Sensor. ***Rate or Lump Sum in Words:***	№			
3.1.12	Replace Existing lighting fixtures with TYPE M ***Rate or Lump Sum in Words:***	№			
3.1.13	TYPE EM: Ceiling Emergency Ceiling mounted non-maintained 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65. ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3.1.14	Replace Existing EM with LED Emergency ***Rate or Lump Sum in Words:***	№			
3.1.15	TYPE EM: Wall Emergency Wall mounted non-maintained, 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65. ***Rate or Lump Sum in Words:***	№			
3.1.16	TYPE EX: Exit sign LED light wall/ceiling mounted maintained, 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65 with engraved letters on fixtures ***Rate or Lump Sum in Words:***	№			
3.1.17	Replace Existing Exit with LED Exits ***Rate or Lump Sum in Words:***	№			
3.1.18	TYPE H: High Bay LED Lightning fixture pendent 100W, 220V, 50Hz. ***Rate or Lump Sum in Words:***	№			
	GENERAL LIGHTING INSTALLATIONS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
4	**FIRE ALARM SYSTEM**				
	FIRE ALARM SYSTEM TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**DATA SYSTEM**				
	DATA SYSTEM **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
6	**UNINTERRUPTIBLE POWER SUPPLY (UPS)**				
	UNINTERRUPTIBLE POWER SUPPLY (UPS) TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
7	**CCTV SYSTEM** Supply, install, connect and test CCTV system complete with conduits installations from the location of the NVR through the different CCTV camera outlets, including the pull or draw boxes and derivation boxes, the junction and outlet boxes, 19" Rack, and all necessary connections to the management station as shown on drawings as per Tender Specifications and the like to the satisfaction of the supervision engineer.				
7.3a New Item	Replace existing Cameras by new one Similar to existing ***Rate or Lump Sum in Words:***	№			
	CCTV SYSTEM **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8	**SOLAR SYSTEM**				
8.1	Supply, install, connect and test the solar lighting system for all Electrical Loads (excluding Lifts, Pumps and AC Units) in perfect operating conditions, including but not limited to: - Photovoltaic multi-crystalline solar panels as shown on the drawings. - Hybrid Inverter - All cables, wires, conduits and all necessary accessories - Aluminum PV mountings - The Contractor shall ensure complete solar system which should function as the main Power Supply - The Contractor should submit detailed shop drawings and materials for approval. - For all blocks of the schools - Lithium Batteries for (Off-Grid Solar Types) - All necessary elevated structures on roof and other areas which are needed to install the required solar panel as mentioned on drawings (Sheds, Parking, etc.) areas ***Rate or Lump Sum in Words:***	LS			
8.1.2a	Replace Unfuctional Battery by new one similar to existing				
8.1.2.1a	Deye BOS-G 51.2 kWh High-Voltage $LiFePO_4$ Battery Energy Storage System – Complete Supply, Installation, Testing & Commissioning ***Rate or Lump Sum in Words:***	№			
8.1.2.1b	Deye BOS-GM5.1 HV $LiFePO_4$ Battery, 51.2 V, 100 Ah, 5.12 kWh, including installation, testing and commissioning ***Rate or Lump Sum in Words:***	№			
8.1.2.1c	Acid Battery, 12 V, 250 Ah ***Rate or Lump Sum in Words:***	№	5		
	SOLAR SYSTEM **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9	**BELL SYSTEM**				
	BELL SYSTEM **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10	**LIFTS REHABILITATION**				
10.1	Rehabilitation of the 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: 650kg Speed: 1.5mps Entrance size/ type: 1100 mm wide single speed center opening ***Rate or Lump Sum in Words:***	№			
	LIFTS REHABILITATION **TOTAL CARRIED TO COLLECTION**				

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Collection

Page №		Amount (US $)
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4.2	PANELBOARDS	.....
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General Summary
984-Almarj Intermediate Public School



General Summary

Description	Amount (US $)
Bill № 2: Civil and Architectural Works ……	
Bill № 3: Mechanical Engineering Services ……	
Bill № 4: 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:

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……

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Description

Bill № 2: Civil and Architectural Works

Bill № 3: Mechanical Engineering Services

Bill № 4: Electrical Engineering Services

General Summary

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Bill № 2: Civil and Architectural Works



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**SITE PREPARATION AND DEMOLITION**				
1.1	**Demolishing and Removal of Debris**				
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. ***Rate or Lump Sum in Words:***	LS	1		
1.1a New Item	**Dismantling** The works include the dismantling works related to the newly installed water tanks and prefabricated units. - The contractor shall deliver the dismantled items to the Building administration / MEHE. ***Rate or Lump Sum in Words:***				
1.1.1.a New Item	Water Tanks ***Rate or Lump Sum in Words:***	№			
1.1.1.b New Item	Prefabricated Units ***Rate or Lump Sum in Words:***	№			
1.1.1.c New Item	Partitions of any type ***Rate or Lump Sum in Words:***	m2			
	SITE PREPARATION AND DEMOLITION **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**EXTERNAL WORKS**				
2.4 2.4.2	**School Fences with Related Gates** Rehabilitate Existing Fence (Strengthening & Rehabilitation) Work to include - Rehabilitate and support all the existing fence as per drawings - Determine the places that requires support - Preparation of shop drawings - Replace all broken elements - Redo all damaged elements and to be similar to existing elements - Finishing works as existing (plastering, paints, stone cladding, etc.) - Rehabilitate existing steel protection (Replace all damaged part by new similar to existing and paint with epoxy as specified) - Replace existing chain link by new one (Galvanized) - Reconstruct the broken and damaged parts and rehabilitate as it was with all similar materials including steel parts with related epoxy paint as per the engineer instructions ***Rate or Lump Sum in Words:***	m			
2.5 2.5.1	**Ramp for External Existing Sidewalk** 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 ***Rate or Lump Sum in Words:***	LS			
	EXTERNAL WORKS **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**CONCRETE** **Not Applicable**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
4	**MASONRY**				
	SITE PREPARATION AND DEMOLITION TOTAL CARRIED TO COLLECTION				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**METAL WORKS**				
5.1	**Provide New Steel Work (Door & Windows)**				
5.1.3	Provide new double glazed aluminum windows with new burglar proof protection ***Rate or Lump Sum in Words:***	№			
5.2	**Rehabilitate and Maintain the Existing Steel Work (Burglar Proof Protection + Opening)** 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 ***Rate or Lump Sum in Words:***	№			
5.2.7b New Item	Rehabilitate existing steel doors work to include all door accessories such as lock, handle and all necessary accessories. ***Rate or Lump Sum in Words:***	№			
5.5a New Item	**Steel Handrail** - Provide new metal handrail similar to exist with all all necessary accessories - Apply one layer of epoxy base paint - Apply putty - Apply epoxy paint as per specification All needed items as per the Engineer instructions				
5.5.1a New Item	Above Parapet ***Rate or Lump Sum in Words:***	m			
	METAL WORKS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
6	**WOOD AND PLASTICS**				
6.1	**Joinery Works**				
6.1.1	**Rehabilitate Existing Kitchen Cupboards** 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 ***Rate or Lump Sum in Words:***	m			
6.1.2	**Rehabilitate Timber Cupboard** Rehabilitate timber cupboards with plastic laminate color, work to include sub framing, drawer units, shelves, fixing and fastening hardware, heavy duty ironmongery, accessories, including finish, soft close, painting and all other related auxiliaries works as required by engineer - 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. - (No patching is allowed for existing wooden works) ***Rate or Lump Sum in Words:***	m^2			
	WOOD AND PLASTICS **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
7	**THERMAL AND MOISTURE PROTECTION**				
7.0	**Preliminaries**				
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 ***Rate or Lump Sum in Words:***	LS			
7.1 7.1.1	**Roof Waterproofing** 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 & debris - 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/m³ where required - Provide Geotextile layers - Provide all aluminum flashing with mastic - Provide finishing material as required - All as specified and approved shop drawings ***Rate or Lump Sum in Words:***	m²			
	THERMAL AND MOISTURE PROTECTION **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8	**DOOR AND WINDOWS**				
8.1	**Wooden Doors and Windows** 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	**Timber Doors** 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				
8.1.1.2	Provide new single leaf wooden door with view frame ***Rate or Lump Sum in Words:***	№			
8.1.1.5	Provide new toilet doors with related accessories as per specifications ***Rate or Lump Sum in Words:***	№			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.1.3	**Rehabilitate the Existing Timber Doors** 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.				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.1.3.1.1	Rehabilitate and paint existing single leaf timber doors with related accessories ***Rate or Lump Sum in Words:***	№			
8.1.3.1.5a New Item	Supply and install wooden doors accessories (Handle - Lock - Etc…) ***Rate or Lump Sum in Words:***	№	2		
8.1.3.1.6a New Item	Replace broken glass of the wooden door view access window ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
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)				
8.2.1.1	Provide new aluminum double glazed window & door panel ***Rate or Lump Sum in Words:***	№			
8.2.1.4	Replace existing elements by new single glazed aluminum windows (6mm) if the quantity of broken glass does not exceed 30% of whole building ***Rate or Lump Sum in Words:***	№			
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. ***Rate or Lump Sum in Words:***	№			
8.2.2.2	Provide new single glazed aluminum partition double leaf door ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
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 ***Rate or Lump Sum in Words:***	№			
8.2.3.1a New Item	Rehabilitate existing Doors ***Rate or Lump Sum in Words:***	№			
8.2.3.2a New Item	Rehabilitate existing aluminum Doors / Windows with all related accessories without Glass ***Rate or Lump Sum in Words:***	№	2		
	DOOR AND WINDOWS **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9	**FINISHES**				
9.1	**Cement Plaster** 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 9.1.1.1	**Internal and External Plaster Works** 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. ***Rate or Lump Sum in Words:***	m^2			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.1.2	**Repair of Existing Plaster (Internal - External) (Cracks, etc.)**				
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. Fill 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			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2	**Tiling Works (Similar to existing)** 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				
9.2.2 9.2.2.1	**New Glazed Colored Ceramic for Walls** Supply and install glazed colored ceramic for walls Include Ceramic Corner (first choice) ***Rate or Lump Sum in Words:***	m^2			
9.2.4 9.2.4.1	**Repair existing broken floor tiles and skirting (all types) and reinstall by new, similar to existing for all rooms and corridors** 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. ***Rate or Lump Sum in Words:***	LS			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2.4a New Item	**Repair existing broken tiles (all types) and reinstall by new, similar to existing for toilets, drinking Basin and kitchen**				
9.2.4.1a New Item	Rehabilitate and repair all damaged and broken tiles, 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. ***Rate or Lump Sum in Words:***	m²			
9.2.7	**Clean and Rub the Existing Floor Tiles and Skirting** 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				
9.2.7.2	Type 2: Ceramic ***Rate or Lump Sum in Words:***	m²			
9.2.7.3	Type 3: Mosaic ***Rate or Lump Sum in Words:***	m²			
9.2.7.5	Type 5: Skirting (any type and size) ***Rate or Lump Sum in Words:***	m			
9.2.7.8a New Item	Type 8: Terrazzo ***Rate or Lump Sum in Words:***	m²			
9.2.7.10a New Item	Type 10: Dismantling of the existing Faux parquet, Rehabilitate, Clean and Rub the Existing any type of flooring tiles and skirting ***Rate or Lump Sum in Words:***	m²			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2.8	**Clean the Existing Decorative Wall Tiles** Rehabilitate any type of decorative wall tiles (mosaic - marble - etc.) Work to include: - All materials and labors - Grouting - Polish and rubbing - All needed items as per the Engineer instruction. - Works to be executed by experts				
9.2.8.4	Type 4: Terrazzo ***Rate or Lump Sum in Words:***	m²			
9.2.9	**Colored PVC for Covered Indoor KG Playgrounds** Supply and install first class safe and antibacterial colored P.V.C. flooring for indoor KG playgrounds at least 6mm thick (Design shape and colors of vinyl flooring should be approved by engineer prior to installation) Work to include: - Shop drawing for design, shape and colors of vinyl flooring should be submitted for each classroom separately for engineer approval - Laminate existing finish flooring after removing vinyl by special concrete material level - Make good and smooth the flooring - Apply self leveling special materials(if needed) to assume Vinyl best finishing - Remove all the existing skirting - Treat the place of the existing skirting - Place the special glue as specified - Place the flooring and screw the skirting P.V.C. profile Labors and materials, screw, etc. All needed items as per the Engineer instructions and approval. Note: Work should be executed by experts and should be executed in presence and approval of supervision engineer and as per required specifications for materials and executions. ***Rate or Lump Sum in Words:***	m²			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.3	**Suspended Ceilings (Similar to existing)** 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 specifications - 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	**Metal Sheet Strips Suspended Ceilings:**				
9.3.1.2	60 x 60 cm Aluminum Suspended Ceiling ***Rate or Lump Sum in Words:***	m²			
9.4	**Gypsum Works (Similar to existing)**				
9.4.2	**Rehabilitate Existing Gypsum Suspended Ceiling (Tiles, Panels)**				
9.4.2.1	Rehabilitate existing gypsum board suspended ceiling n the case of damage or during construction. Works to include material, labor, equipment, etc. and to the engineer's approval ***Rate or Lump Sum in Words:***	m²			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.5	**Painting**				
9.5.1	**Wall and Ceilings Paint Works** 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, ***All paint types must be lead-free and Low VOC (Volatile Organic Compounds)***				
9.5.1.1	Super Rubber Paint for new walls and ceilings ***Rate or Lump Sum in Words:***	m²			
9.5.1.2	Super Rubber Paint for old walls and ceilings ***Rate or Lump Sum in Words:***	m²	500		
9.5.1.3	Oil Paint for new walls and ceilings ***Rate or Lump Sum in Words:***	m²			
9.5.1.4	Oil Paints for old walls and ceilings ***Rate or Lump Sum in Words:***	m²	1,450		

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
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. ***Rate or Lump Sum in Words:***	m²			
9.5.6	**<u>Epoxy coating (Playground -covered indoor Car Parking)</u>**				
9.5.6.5a New Item	For Roof ***Rate or Lump Sum in Words:***	m²			
	FINISHES **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10	**SPECIALTIES**				
10.1	**Bathrooms Accessories** - 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				
10.1.1 10.1.1.1	**Paper Roller Holder** Supply and install paper holder no rust, no stain stainless steel 316 with all accessories and fixation (anti-rust materials) for good quality and at the places shown on drawings All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	№ 	1 		
10.1.2 10.1.2.1	**Soap Dispenser** Supply and install stainless steel 316 no rust, no stain, soap dispenser wall type fixation (anti-rust materials and accessories) with all needed items All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	 №			
10.1.3 10.1.3.1	**Paper Holder Box** Supply and install paper holder box from stainless steel 316 no rust, no stain, with all needed works and fixation (anti-rust materials and accessories) The box should be from a good manufacturer All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	 №			
10.1.4	**Mirror for Lavatories** 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 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) ***Rate or Lump Sum in Words:***	№ 			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10.1.5	**<u>Handicapped Bathroom Accessories</u>** - Remove and cart away old damaged fixtures Supply and install all needed bars for the handicapped toilet of stainless steel 316 Work to include: - Materials - Labors - and all needed items as per the Engineer instructions				
10.1.5.1	Supply and install vertical grab rail 60cm bars ***Rate or Lump Sum in Words:***	№			
10.1.5.2	Supply and install Horizontal grab rail 60cm bars ***Rate or Lump Sum in Words:***	№			
10.1.5.3	Supply and install Drop Down Rail removable arm 80cm ***Rate or Lump Sum in Words:***	№			
10.1.5.4	Alarm pull cord for emergency ***Rate or Lump Sum in Words:***	№			
10.1.5.5a New Item	Supply and install partition between urinals similar to existing with all needed fixation accessories ***Rate or Lump Sum in Words:***	№			
10.2	**Classroom Specialties**				
10.2.1 10.2.1.1	**<u>White Teaching Boards</u>** Supply and install White teaching boards from approved manufacturer as per specifications of Ministry of Education and Higher Education and corresponding to the site Cost to include: - (3600mm x 1200mm) final dimensions as per site limitation - Materials and labors - Felt marker pens and eraser (12 marker pens + 2 erases for each white board) - Stainless Steel screws - Remove the existing board - All needed works as per the Engineer instructions ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10.3	**Resin Work**				
10.3.1	**Drinking Basin** 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) ***Rate or Lump Sum in Words:***	№			
10.3.1.7a New Item	Rehabilitation of existing Drinking Basin - Any Length (Traps, Taps, Cleaning and repair of any damaged elements) ***Rate or Lump Sum in Words:***	№			
10.3.4	**Kitchen Counter** 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				
10.3.4.3	Kitchen Counter - Length (1.76 to 2.05 m) ***Rate or Lump Sum in Words:***	№			
10.5	**Internal Curtains** Supply and install internal rolling type tissue and polyester collapsible type curtain as per specifications and at the location as shown on drawings Works to include: - Materials - Labors - Heavy Duty Accessories - All needed works as per the Engineer instructions and approval				
10.5.1	On External Opening ***Rate or Lump Sum in Words:***	m²			
	SPECIALTIES **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
11	**EQUIPMENT**				
	EQUIPMENT **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
12	**FURNISHINGS**				
12.1	**INSTITUTIONAL FURNITURE** Supply and install the following institutional furniture complete including all necessary fixing and accessories, all as specified, shown on the drawings and to the satisfaction of the Engineer.				
12.1.1	**Classrooms Furniture**				
12.1.1.1	Standard desk with chair for classroom, single seat. ***Rate or Lump Sum in Words:***	№	2		
12.1.2	**Conference Room Furniture**				
12.1.2.1	Standard table. ***Rate or Lump Sum in Words:***	№			
12.1.2.2	Standard chairs. ***Rate or Lump Sum in Words:***	№			
12.1.6 12.1.6.1	**Hooks with Rails for Hats and Coats** Hooks with rails for hats and coats, rail size 120mm high x 20mm thick, softwood, treated and painted, countersunk screwed to wall & painted steel hooks every 200 mm (5№ hooks per linear meter of rail). ***Rate or Lump Sum in Words:***	lm	8		
	FURNISHINGS **TOTAL CARRIED TO COLLECTION**				

Collection

Page №		Amount (US $)
2.1	SITE PREPARATION AND DEMOLITION	.....
2.2	EXTERNAL WORKS	.....
2.3	CONCRETE	.....
2.4	MASONRY	.....
2.5	METAL WORKS	.....
2.6	WOOD AND PLASTICS	.....
2.7	THERMAL AND MOISTURE PROTECTION	.....
2.8	DOOR AND WINDOWS	.....
2.9	FINISHES	.....
2.10	SPECIALTIES	.....
2.11	EQUIPMENT	.....
2.12	FURNISHINGS	.....
	Total Carried to General Summary	.....

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Bill № 3: Mechanical Engineering Services



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**GENERAL TECHNICAL REQUIREMENTS**				
1.1	**General Mechanical Requirements**				
1.1.1	Revise all Mechanical drawings and make sure that they can be executed properly. ***Rate or Lump Sum in Words:***	Item			
1.2	**Rehabilitation Works General Requirements** 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, floor drains, roof drains, manholes, pumps, WC tanks, adding where applicable all necessary valves, flush valves, etc., and all other necessary works. ***Rate or Lump Sum in Words:***	Item	1		
1.2.2	Maintenance and rehabilitation of existing HVAC & fire fighting systems, including all necessary piping, duct works, pumps and controls, fans, mechanical works inside shafts, air conditioning units, etc. ***Rate or Lump Sum in Words:***	Item			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1.2.3a New Item	Contractor Shall remove existing, newly added showers. Works to include - Removal of fixtures (Shower head or hand) - Replacement of damaged tiles by new one similar to existing. All other nessessary works (Finishes and mechanical works) ***Rate or Lump Sum in Words:***	№			
1.2.4a New Item	Contractor Shall remove existing, newly added Water Heater . Works to include - Removal of all pipes and accessories - Replacement of damaged tiles by new one similar to existing. All other nessessary works (Finishes and mechanical works) ***Rate or Lump Sum in Words:***	№			
	GENERAL TECHNICAL REQUIREMENTS **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION**				
2.3	**Drain Cover** Supply and install floor drain cover (P.E) 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 Engineer instructions				
2.3.1	Cover for FCO ***Rate or Lump Sum in Words:***	№			
	SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**WATER PIPE WORK INSTALLATION**				
3.2	**Electrical Water Heater** Electrical water heater as specified and scheduled; include pipe work connections, temperature and pressure gauges, control and power wiring from the MCC, hot water and pipe work connections, control and high limit control valves, isolation and safety valves, thermal insulation, valve boxes, bonding and identification, and the heater should be of a good trade mark of European or west made or first class Lebanese product.				
3.2.2	EWH-02 (100 L) ***Rate or Lump Sum in Words:***	№			
	WATER PIPE WORK INSTALLATION TOTAL CARRIED TO COLLECTION				
4	**FIRE PROTECTION**				
	FIRE PROTECTION TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**SANITARY FIXTURES**				
5.2	**W.C. For Non Kids** 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 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)				
5.2.1	EWC-01 (Wall Hang - 52 x 36 cm) ***Rate or Lump Sum in Words:***	№			
5.2.3a New Item	EWC Accessories (Seat Cover - Flush Tank Cover / Push Button Etc…) ***Rate or Lump Sum in Words:***	№			
5.4	**Lavatories for Non Kids** Supply and install semi pedestal wash basin similar to Ideal Standard No. 742001 or approved equal 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) ***Rate or Lump Sum in Words:***	№			
5.4.2	LAV-02 (wall hang, handicapped with mixers 56 x 41 cm) ***Rate or Lump Sum in Words:***	№			
5.4.3a	LAV accessories (Traps - Mixers - Fixation, Etc…) ***Rate or Lump Sum in Words:***	№	4		

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5.5	**Urinal** Supply and installation of high quality urinal units complete with proper wall fixation with anti-dust materials including drainage & water supply connection as per the approved shop drawings. Cost to include all necessary accessories, valves, sensors to provide workable system.				
5.5.1	Urinal ***Rate or Lump Sum in Words:***	№			
5.6	**Self Close Taps on Kids & Students Lavatories** Supply and install self close taps to be fixed in the lavatory body as manufactured by Grohe Item No. 36-173 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 ***Rate or Lump Sum in Words:***	№			
5.7	**Wall Type Self Close Taps on Drinking Basins** Supply and install self close taps to be fixed in the drinking basin body as manufactured by Grohe Item No. 36-176 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 ***Rate or Lump Sum in Words:***	№			
5.8	**Kitchen Sink Accessories** Supply and install kitchen sink accessories such as chrome trap, angle valve, mixers as specified				
5.8.1	Kitchen Sink Accessories ***Rate or Lump Sum in Words:***	№	1		

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5.10	**Lavatories Resin Accessories** Supply and install lavatories resin accessories such as chrome trap, angle valves as specified				
5.10.1	Lavatories Resin Accessories ***Rate or Lump Sum in Words:***	№			
5.14	**Hose Bib** Supply and install Hose Bib taps including water connection & all necessary accessories as required				
5.14.1	HB - 01 ***Rate or Lump Sum in Words:***	№	4		
5.14.2a New Item	Maintenace of Potable Water System Contractor shall ensure proper functionality of the system ***Rate or Lump Sum in Words:***	Item			
5.14.3a New Item	Rehabilitation of existing septic tank, including cleaning, crack and joint sealing, waterproofing, replacement of damaged fittings, and all necessary works to restore watertightness and proper operation ***Rate or Lump Sum in Words:***	Item			
	SANITARY FIXTURES **TOTAL CARRIED TO COLLECTION**				

Collection

Page №		Amount (US $)
3.1	GENERAL TECHNICAL REQUIREMENTS	.....
3.2	SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION	.....
3.3	WATER PIPE WORK INSTALLATION	.....
3.4	FIRE PROTECTION	.....
3.5	SANITARY FIXTURES	.....
	Total Carried to General Summary	.....

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Bill № 4: Electrical Engineering Services



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**BASIC ELECTRICAL REQUIREMENTS** 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	**Fixing and Repairing** 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 ***Rate or Lump Sum in Words:***	LS	1		
1.1.2	Wires and cables ***Rate or Lump Sum in Words:***	LS			
1.1.3	Sockets and switches ***Rate or Lump Sum in Words:***	LS	1		
1.1.4	Circuit breakers ***Rate or Lump Sum in Words:***	LS			
1.1.5	Disconnecting switches ***Rate or Lump Sum in Words:***	LS			
	BASIC ELECTRICAL REQUIREMENTS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**PANELBOARDS**				
2.2	**Computer Lab Panel Board (Rehabilitation)**				
2.2.1	Rehabilitate and install the Computer Lab Panel Board, works to include: - Rehabilitation and connection - Wires installation - Accessories - All Accessories Failed Complete to shop drawings and to the satisfaction of the engineer (ready to use) ***Rate or Lump Sum in Words:***	№			
2.3a New Item	Supply and Install New Panel Board Cover ***Rate or Lump Sum in Words:***	№			
	PANELBOARDS **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**GENERAL LIGHTING INSTALLATIONS**				
3.1	**Lighting Fixtures** 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 φ ≥ 0.9 ***Rate or Lump Sum in Words:***	№	4		
3.1.2	Replace existing lighting fixtures with C1 ***Rate or Lump Sum in Words:***	№			
3.1.3	TYPE C2: as same as TYPE C1 but Pendent mounted ***Rate or Lump Sum in Words:***	№			
3.1.4	TYPE A2 / A3: 600x600 mm LED Panel 3600lm, 33W, 4000K, 80CRI surface-mount/recessed, die-cast aluminum, IP20 ***Rate or Lump Sum in Words:***	№			
3.1.5	TYPE A1: as same as TYPE A2 but Pendent mounted ***Rate or Lump Sum in Words:***	№			
3.1.6	TYPE N4 / N3: LED - 900lm - 12.5W - 3000K - 80CRI - WW Surface mounted / Recessed Downlight Round - 120 deg ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3.1.7	TYPE F: PLAFONIERA OVAL Wall mounted - IP54 Aluminum die-cast housing IK 06 - CLASS I Lamp SHOULD BE LED 900Lm, 4000K, 17W. ***Rate or Lump Sum in Words:***	№			
3.1.8	TYPE W: A++ / COB LED 3000K 230V CRI 90 - 3955lm - 42W IP65 - IK07 - Die-cast EN AB-47100 aluminum housing with high corrosion resistance. ***Rate or Lump Sum in Words:***	№			
3.1.9	TYPE L (LED): OVAL 18W 516Lm IP54 IK06 FOR LIFT & TECHNICAL SHAFTS. Wall mounted luminaire Aluminum die cast housing in EN AB-47100 (low copper content) with high resistance against corrosion. IK 06 Sand blasted glass diffuser. Lamp fixed position. LOR 43% Isolation: CLASS I. Black (cod.09). Lamp not included. ***Rate or Lump Sum in Words:***	№			
3.1.10	Replace Existing lighting fixtures with TYPE L (LED) ***Rate or Lump Sum in Words:***	№			
3.1.11	TYPE M: LED - 1500lm - 17W - 4000K - 80CRI - Ceiling mounted - With Motion Sensor. ***Rate or Lump Sum in Words:***	№			
3.1.12	Replace Existing lighting fixtures with TYPE M ***Rate or Lump Sum in Words:***	№			
3.1.13	TYPE EM: Ceiling Emergency Ceiling mounted non-maintained 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65. ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3.1.14	Replace Existing EM with LED Emergency ***Rate or Lump Sum in Words:***	№			
3.1.15	TYPE EM: Wall Emergency Wall mounted non-maintained, 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65. ***Rate or Lump Sum in Words:***	№			
3.1.16	TYPE EX: Exit sign LED light wall/ceiling mounted maintained, 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65 with engraved letters on fixtures ***Rate or Lump Sum in Words:***	№			
3.1.17	Replace Existing Exit with LED Exits ***Rate or Lump Sum in Words:***	№			
3.1.18	TYPE H: High Bay LED Lightning fixture pendent 100W, 220V, 50Hz. ***Rate or Lump Sum in Words:***	№			
	GENERAL LIGHTING INSTALLATIONS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
4	**FIRE ALARM SYSTEM**				
	FIRE ALARM SYSTEM **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**DATA SYSTEM**				
	DATA SYSTEM **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
6	**UNINTERRUPTIBLE POWER SUPPLY (UPS)**				
	UNINTERRUPTIBLE POWER SUPPLY (UPS) TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
7	**CCTV SYSTEM** Supply, install, connect and test CCTV system complete with conduits installations from the location of the NVR through the different CCTV camera outlets, including the pull or draw boxes and derivation boxes, the junction and outlet boxes, 19" Rack, and all necessary connections to the management station as shown on drawings as per Tender Specifications and the like to the satisfaction of the supervision engineer.				
7.3a New Item	Replace existing Cameras by new one Similar to existing ***Rate or Lump Sum in Words:***	№			
	CCTV SYSTEM **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8	**SOLAR SYSTEM**				
8.1	Supply, install, connect and test the solar lighting system for all Electrical Loads (excluding Lifts, Pumps and AC Units) in perfect operating conditions, including but not limited to: - Photovoltaic multi-crystalline solar panels as shown on the drawings. - Hybrid Inverter - All cables, wires, conduits and all necessary accessories - Aluminum PV mountings - The Contractor shall ensure complete solar system which should function as the main Power Supply - The Contractor should submit detailed shop drawings and materials for approval. - For all blocks of the schools - Lithium Batteries for (Off-Grid Solar Types) - All necessary elevated structures on roof and other areas which are needed to install the required solar panel as mentioned on drawings (Sheds, Parking, etc.) areas ***Rate or Lump Sum in Words:***	LS			
8.1.2a	Replace Unfuctional Battery by new one similar to existing				
8.1.2.1a	Deye BOS-G 51.2 kWh High-Voltage $LiFePO_4$ Battery Energy Storage System – Complete Supply, Installation, Testing & Commissioning ***Rate or Lump Sum in Words:***	№			
8.1.2.1b	Deye BOS-GM5.1 HV $LiFePO_4$ Battery, 51.2 V, 100 Ah, 5.12 kWh, including installation, testing and commissioning ***Rate or Lump Sum in Words:***	№	6		
8.1.2.1c	Acid Battery, 12 V, 250 Ah ***Rate or Lump Sum in Words:***	№			
	SOLAR SYSTEM **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9	**BELL SYSTEM**				
	BELL SYSTEM **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10	**LIFTS REHABILITATION**				
10.1	Rehabilitation of the 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: 650kg Speed: 1.5mps Entrance size/ type: 1100 mm wide single speed center opening ***Rate or Lump Sum in Words:***	№			
	LIFTS REHABILITATION **TOTAL CARRIED TO COLLECTION**				

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Collection

Page №		Amount (US $)
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4.2	PANELBOARDS	.....
4.3	GENERAL LIGHTING INSTALLATIONS	.....
4.4	FIRE ALARM SYSTEM	.....
4.5	DATA SYSTEM	.....
4.6	UNINTERRUPTIBLE POWER SUPPLY (UPS)	.....
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General Summary
987-Joub Jannine Mixed Public School



General Summary

Description	Amount (US $)
Bill № 2: Civil and Architectural Works ……	
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* Total Amount of Bill of Quantities ……	
* Discount by Tenderer (_____ %) ……	
* Total Amount of Tender (VAT Not Applicable) ……	

* Total Amount of Tender in Words:

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Description

Bill № 2: Civil and Architectural Works

Bill № 3: Mechanical Engineering Services

Bill № 4: Electrical Engineering Services

General Summary

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Bill № 2: Civil and Architectural Works



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**SITE PREPARATION AND DEMOLITION**				
1.1	**Demolishing and Removal of Debris**				
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. ***Rate or Lump Sum in Words:***	LS	1		
1.1a New Item	**Dismantling** The works include the dismantling works related to the newly installed water tanks and prefabricated units. - The contractor shall deliver the dismantled items to the Building administration / MEHE. ***Rate or Lump Sum in Words:***				
1.1.1.a New Item	Water Tanks ***Rate or Lump Sum in Words:***	№			
1.1.1.b New Item	Prefabricated Units ***Rate or Lump Sum in Words:***	№			
1.1.1.c New Item	Partitions of any type ***Rate or Lump Sum in Words:***	m2	75		
	SITE PREPARATION AND DEMOLITION **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**EXTERNAL WORKS**				
2.4 2.4.2	**School Fences with Related Gates** Rehabilitate Existing Fence (Strengthening & Rehabilitation) Work to include - Rehabilitate and support all the existing fence as per drawings - Determine the places that requires support - Preparation of shop drawings - Replace all broken elements - Redo all damaged elements and to be similar to existing elements - Finishing works as existing (plastering, paints, stone cladding, etc.) - Rehabilitate existing steel protection (Replace all damaged part by new similar to existing and paint with epoxy as specified) - Replace existing chain link by new one (Galvanized) - Reconstruct the broken and damaged parts and rehabilitate as it was with all similar materials including steel parts with related epoxy paint as per the engineer instructions ***Rate or Lump Sum in Words:***	m			
2.5 2.5.1	**Ramp for External Existing Sidewalk** 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 ***Rate or Lump Sum in Words:***	LS			
	EXTERNAL WORKS **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**CONCRETE** **Not Applicable**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
4	**MASONRY**				
	SITE PREPARATION AND DEMOLITION TOTAL CARRIED TO COLLECTION				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**METAL WORKS**				
5.1	**Provide New Steel Work (Door & Windows)**				
5.1.3	Provide new double glazed aluminum windows with new burglar proof protection ***Rate or Lump Sum in Words:***	№			
5.2	**Rehabilitate and Maintain the Existing Steel Work (Burglar Proof Protection + Opening)** 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 ***Rate or Lump Sum in Words:***	№			
5.2.7b New Item	Rehabilitate existing steel doors work to include all door accessories such as lock, handle and all necessary accessories. ***Rate or Lump Sum in Words:***	№			
5.5a New Item	**Steel Handrail** - Provide new metal handrail similar to exist with all all necessary accessories - Apply one layer of epoxy base paint - Apply putty - Apply epoxy paint as per specification All needed items as per the Engineer instructions				
5.5.1a New Item	Above Parapet ***Rate or Lump Sum in Words:***	m			
	METAL WORKS **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
6	**WOOD AND PLASTICS**				
6.1	**Joinery Works**				
6.1.1	**Rehabilitate Existing Kitchen Cupboards** 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 ***Rate or Lump Sum in Words:***	m			
6.1.2	**Rehabilitate Timber Cupboard** Rehabilitate timber cupboards with plastic laminate color, work to include sub framing, drawer units, shelves, fixing and fastening hardware, heavy duty ironmongery, accessories, including finish, soft close, painting and all other related auxiliaries works as required by engineer - 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. - (No patching is allowed for existing wooden works) ***Rate or Lump Sum in Words:***	m^2			
	WOOD AND PLASTICS **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
7	**THERMAL AND MOISTURE PROTECTION**				
7.0	**Preliminaries**				
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 ***Rate or Lump Sum in Words:***	LS			
7.1 7.1.1	**Roof Waterproofing** 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 & debris - 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/m³ where required - Provide Geotextile layers - Provide all aluminum flashing with mastic - Provide finishing material as required - All as specified and approved shop drawings ***Rate or Lump Sum in Words:***	m²			
	THERMAL AND MOISTURE PROTECTION **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8	**DOOR AND WINDOWS**				
8.1	**Wooden Doors and Windows** 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	**Timber Doors** 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				
8.1.1.2	Provide new single leaf wooden door with view frame ***Rate or Lump Sum in Words:***	№	2		
8.1.1.5	Provide new toilet doors with related accessories as per specifications ***Rate or Lump Sum in Words:***	№			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.1.3	**Rehabilitate the Existing Timber Doors** 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.				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.1.3.1.1	Rehabilitate and paint existing single leaf timber doors with related accessories ***Rate or Lump Sum in Words:***	№	9		
8.1.3.1.5a New Item	Supply and install wooden doors accessories (Handle - Lock - Etc…) ***Rate or Lump Sum in Words:***	№	5		
8.1.3.1.6a New Item	Replace broken glass of the wooden door view access window ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
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)				
8.2.1.1	Provide new aluminum double glazed window & door panel ***Rate or Lump Sum in Words:***	№			
8.2.1.4	Replace existing elements by new single glazed aluminum windows (6mm) if the quantity of broken glass does not exceed 30% of whole building ***Rate or Lump Sum in Words:***	№			
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. ***Rate or Lump Sum in Words:***	№			
8.2.2.2	Provide new single glazed aluminum partition double leaf door ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
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 ***Rate or Lump Sum in Words:***	№			
8.2.3.1a New Item	Rehabilitate existing Doors ***Rate or Lump Sum in Words:***	№			
8.2.3.2a New Item	Rehabilitate existing aluminum Doors / Windows with all related accessories without Glass ***Rate or Lump Sum in Words:***	№			
	DOOR AND WINDOWS **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9	**FINISHES**				
9.1	**Cement Plaster** 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 9.1.1.1	**Internal and External Plaster Works** 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. ***Rate or Lump Sum in Words:***	m^2			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.1.2	**Repair of Existing Plaster (Internal - External) (Cracks, etc.)**				
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. Fill 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			



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2	**Tiling Works (Similar to existing)** 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				
9.2.2 9.2.2.1	**New Glazed Colored Ceramic for Walls** Supply and install glazed colored ceramic for walls Include Ceramic Corner (first choice) ***Rate or Lump Sum in Words:***	m^2			
9.2.4 9.2.4.1	**Repair existing broken floor tiles and skirting (all types) and reinstall by new, similar to existing for all rooms and corridors** 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. ***Rate or Lump Sum in Words:***	LS			



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2.4a New Item	**Repair existing broken tiles (all types) and reinstall by new, similar to existing for toilets, drinking Basin and kitchen**				
9.2.4.1a New Item	Rehabilitate and repair all damaged and broken tiles, 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. ***Rate or Lump Sum in Words:***	m²	170		
9.2.7	**Clean and Rub the Existing Floor Tiles and Skirting** 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				
9.2.7.2	Type 2: Ceramic ***Rate or Lump Sum in Words:***	m²			
9.2.7.3	Type 3: Mosaic ***Rate or Lump Sum in Words:***	m²			
9.2.7.5	Type 5: Skirting (any type and size) ***Rate or Lump Sum in Words:***	m			
9.2.7.8a New Item	Type 8: Terrazzo ***Rate or Lump Sum in Words:***	m²			
9.2.7.10a New Item	Type 10: Dismantling of the existing Faux parquet, Rehabilitate, Clean and Rub the Existing any type of flooring tiles and skirting ***Rate or Lump Sum in Words:***	m²			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2.8	**Clean the Existing Decorative Wall Tiles** Rehabilitate any type of decorative wall tiles (mosaic - marble - etc.) Work to include: - All materials and labors - Grouting - Polish and rubbing - All needed items as per the Engineer instruction. - Works to be executed by experts				
9.2.8.4	Type 4: Terrazzo ***Rate or Lump Sum in Words:***	m²			
9.2.9	**Colored PVC for Covered Indoor KG Playgrounds** Supply and install first class safe and antibacterial colored P.V.C. flooring for indoor KG playgrounds at least 6mm thick (Design shape and colors of vinyl flooring should be approved by engineer prior to installation) Work to include: - Shop drawing for design, shape and colors of vinyl flooring should be submitted for each classroom separately for engineer approval - Laminate existing finish flooring after removing vinyl by special concrete material level - Make good and smooth the flooring - Apply self leveling special materials(if needed) to assume Vinyl best finishing - Remove all the existing skirting - Treat the place of the existing skirting - Place the special glue as specified - Place the flooring and screw the skirting P.V.C. profile Labors and materials, screw, etc. All needed items as per the Engineer instructions and approval. Note: Work should be executed by experts and should be executed in presence and approval of supervision engineer and as per required specifications for materials and executions. ***Rate or Lump Sum in Words:***	m²			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.3	**Suspended Ceilings (Similar to existing)** 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 specifications - 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	**Metal Sheet Strips Suspended Ceilings:**				
9.3.1.2	60 x 60 cm Aluminum Suspended Ceiling ***Rate or Lump Sum in Words:***	m^2			
9.4	**Gypsum Works (Similar to existing)**				
9.4.2	**Rehabilitate Existing Gypsum Suspended Ceiling (Tiles, Panels)**				
9.4.2.1	Rehabilitate existing gypsum board suspended ceiling n the case of damage or during construction. Works to include material, labor, equipment, etc. and to the engineer's approval ***Rate or Lump Sum in Words:***	m^2			



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.5	**Painting**				
9.5.1	**Wall and Ceilings Paint Works** 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, ***All paint types must be lead-free and Low VOC (Volatile Organic Compounds)***				
9.5.1.1	Super Rubber Paint for new walls and ceilings ***Rate or Lump Sum in Words:***	m²			
9.5.1.2	Super Rubber Paint for old walls and ceilings ***Rate or Lump Sum in Words:***	m²	200		
9.5.1.3	Oil Paint for new walls and ceilings ***Rate or Lump Sum in Words:***	m²			
9.5.1.4	Oil Paints for old walls and ceilings ***Rate or Lump Sum in Words:***	m²	450		

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.5.2 9.5.2.1	**<u>Outside Walls Paint (Old and New Walls and Ceilings)</u>** 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. ***Rate or Lump Sum in Words:***	m^2			
9.5.6	**<u>Epoxy coating (Playground -covered indoor Car Parking)</u>**				
9.5.6.5a New Item	For Roof ***Rate or Lump Sum in Words:***	m^2			
	FINISHES **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10	**SPECIALTIES**				
10.1	**Bathrooms Accessories** - 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				
10.1.1 10.1.1.1	**Paper Roller Holder** Supply and install paper holder no rust, no stain stainless steel 316 with all accessories and fixation (anti-rust materials) for good quality and at the places shown on drawings All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	№ 	1 	 	
10.1.2 10.1.2.1	**Soap Dispenser** Supply and install stainless steel 316 no rust, no stain, soap dispenser wall type fixation (anti-rust materials and accessories) with all needed items All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	 №	 1	 	
10.1.3 10.1.3.1	**Paper Holder Box** Supply and install paper holder box from stainless steel 316 no rust, no stain, with all needed works and fixation (anti-rust materials and accessories) The box should be from a good manufacturer All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	 №	 	 	
10.1.4	**Mirror for Lavatories** 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 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) ***Rate or Lump Sum in Words:***	 №	 	 	

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10.1.5	**<u>Handicapped Bathroom Accessories</u>** - Remove and cart away old damaged fixtures Supply and install all needed bars for the handicapped toilet of stainless steel 316 Work to include: - Materials - Labors - and all needed items as per the Engineer instructions				
10.1.5.1	Supply and install vertical grab rail 60cm bars ***Rate or Lump Sum in Words:***	№			
10.1.5.2	Supply and install Horizontal grab rail 60cm bars ***Rate or Lump Sum in Words:***	№			
10.1.5.3	Supply and install Drop Down Rail removable arm 80cm ***Rate or Lump Sum in Words:***	№			
10.1.5.4	Alarm pull cord for emergency ***Rate or Lump Sum in Words:***	№			
10.1.5.5a New Item	Supply and install partition between urinals similar to existing with all needed fixation accessories ***Rate or Lump Sum in Words:***	№			
10.2	**Classroom Specialties**				
10.2.1 10.2.1.1	**<u>White Teaching Boards</u>** Supply and install White teaching boards from approved manufacturer as per specifications of Ministry of Education and Higher Education and corresponding to the site Cost to include: - (3600mm x 1200mm) final dimensions as per site limitation - Materials and labors - Felt marker pens and eraser (12 marker pens + 2 erases for each white board) - Stainless Steel screws - Remove the existing board - All needed works as per the Engineer instructions ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10.3	**Resin Work**				
10.3.1	**Drinking Basin** 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) ***Rate or Lump Sum in Words:***	№			
10.3.1.7a New Item	Rehabilitation of existing Drinking Basin - Any Length (Traps, Taps, Cleaning and repair of any damaged elements) ***Rate or Lump Sum in Words:***	№	1		
10.3.4	**Kitchen Counter** 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				
10.3.4.3	Kitchen Counter - Length (1.76 to 2.05 m) ***Rate or Lump Sum in Words:***	№			
10.5	**Internal Curtains** Supply and install internal rolling type tissue and polyester collapsible type curtain as per specifications and at the location as shown on drawings Works to include: - Materials - Labors - Heavy Duty Accessories - All needed works as per the Engineer instructions and approval				
10.5.1	On External Opening ***Rate or Lump Sum in Words:***	m^2			
	SPECIALTIES **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
11	**EQUIPMENT**				
	EQUIPMENT **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
12	**FURNISHINGS**				
12.1	**INSTITUTIONAL FURNITURE** Supply and install the following institutional furniture complete including all necessary fixing and accessories, all as specified, shown on the drawings and to the satisfaction of the Engineer.				
12.1.1	**Classrooms Furniture**				
12.1.1.1	Standard desk with chair for classroom, single seat. ***Rate or Lump Sum in Words:***	№			
12.1.2	**Conference Room Furniture**				
12.1.2.1	Standard table. ***Rate or Lump Sum in Words:***	№			
12.1.2.2	Standard chairs. ***Rate or Lump Sum in Words:***	№			
12.1.6 12.1.6.1	**Hooks with Rails for Hats and Coats** Hooks with rails for hats and coats, rail size 120mm high x 20mm thick, softwood, treated and painted, countersunk screwed to wall & painted steel hooks every 200 mm (5№ hooks per linear meter of rail). ***Rate or Lump Sum in Words:***	lm			
	FURNISHINGS **TOTAL CARRIED TO COLLECTION**				

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Bill № 3: Mechanical Engineering Services



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**GENERAL TECHNICAL REQUIREMENTS**				
1.1	**General Mechanical Requirements**				
1.1.1	Revise all Mechanical drawings and make sure that they can be executed properly. ***Rate or Lump Sum in Words:***	Item			
1.2	**Rehabilitation Works General Requirements** 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, floor drains, roof drains, manholes, pumps, WC tanks, adding where applicable all necessary valves, flush valves, etc., and all other necessary works. ***Rate or Lump Sum in Words:***	Item	1		
1.2.2	Maintenance and rehabilitation of existing HVAC & fire fighting systems, including all necessary piping, duct works, pumps and controls, fans, mechanical works inside shafts, air conditioning units, etc. ***Rate or Lump Sum in Words:***	Item	1		

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1.2.3a New Item	Contractor Shall remove existing, newly added showers. Works to include - Removal of fixtures (Shower head or hand) - Replacement of damaged tiles by new one similar to existing. All other nessessary works (Finishes and mechanical works) ***Rate or Lump Sum in Words:***	№			
1.2.4a New Item	Contractor Shall remove existing, newly added Water Heater . Works to include - Removal of all pipes and accessories - Replacement of damaged tiles by new one similar to existing. All other nessessary works (Finishes and mechanical works) ***Rate or Lump Sum in Words:***	№			
	GENERAL TECHNICAL REQUIREMENTS **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION**				
2.3	**Drain Cover** Supply and install floor drain cover (P.E) 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 Engineer instructions				
2.3.1	Cover for FCO ***Rate or Lump Sum in Words:***	№			
	SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**WATER PIPE WORK INSTALLATION**				
3.2	**Electrical Water Heater** Electrical water heater as specified and scheduled; include pipe work connections, temperature and pressure gauges, control and power wiring from the MCC, hot water and pipe work connections, control and high limit control valves, isolation and safety valves, thermal insulation, valve boxes, bonding and identification, and the heater should be of a good trade mark of European or west made or first class Lebanese product.				
3.2.2	EWH-02 (100 L) ***Rate or Lump Sum in Words:***	№			
	WATER PIPE WORK INSTALLATION TOTAL CARRIED TO COLLECTION				
4	**FIRE PROTECTION**				
	FIRE PROTECTION TOTAL CARRIED TO COLLECTION				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**SANITARY FIXTURES**				
5.2	**W.C. For Non Kids** 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 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)				
5.2.1	EWC-01 (Wall Hang - 52 x 36 cm) ***Rate or Lump Sum in Words:***	№			
5.2.3a New Item	EWC Accessories (Seat Cover - Flush Tank Cover / Push Button Etc…) ***Rate or Lump Sum in Words:***	№	9		
5.4	**Lavatories for Non Kids** Supply and install semi pedestal wash basin similar to Ideal Standard No. 742001 or approved equal 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) ***Rate or Lump Sum in Words:***	№			
5.4.2	LAV-02 (wall hang, handicapped with mixers 56 x 41 cm) ***Rate or Lump Sum in Words:***	№			
5.4.3a	LAV accessories (Traps - Mixers - Fixation, Etc…) ***Rate or Lump Sum in Words:***	№			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5.5	**Urinal** Supply and installation of high quality urinal units complete with proper wall fixation with anti-dust materials including drainage & water supply connection as per the approved shop drawings. Cost to include all necessary accessories, valves, sensors to provide workable system.				
5.5.1	Urinal ***Rate or Lump Sum in Words:***	№			
5.6	**Self Close Taps on Kids & Students Lavatories** Supply and install self close taps to be fixed in the lavatory body as manufactured by Grohe Item No. 36-173 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 ***Rate or Lump Sum in Words:***	№	7		
5.7	**Wall Type Self Close Taps on Drinking Basins** Supply and install self close taps to be fixed in the drinking basin body as manufactured by Grohe Item No. 36-176 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 ***Rate or Lump Sum in Words:***	№	10		
5.8	**Kitchen Sink Accessories** Supply and install kitchen sink accessories such as chrome trap, angle valve, mixers as specified				
5.8.1	Kitchen Sink Accessories ***Rate or Lump Sum in Words:***	№			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5.10	**Lavatories Resin Accessories** Supply and install lavatories resin accessories such as chrome trap, angle valves as specified				
5.10.1	Lavatories Resin Accessories ***Rate or Lump Sum in Words:***	№			
5.14	**Hose Bib** Supply and install Hose Bib taps including water connection & all necessary accessories as required				
5.14.1	HB - 01 ***Rate or Lump Sum in Words:***	№	7		
5.14.2a New Item	Maintenace of Potable Water System Contractor shall ensure proper functionality of the system ***Rate or Lump Sum in Words:***	Item			
5.14.3a New Item	Rehabilitation of existing septic tank, including cleaning, crack and joint sealing, waterproofing, replacement of damaged fittings, and all necessary works to restore watertightness and proper operation ***Rate or Lump Sum in Words:***	Item			
	SANITARY FIXTURES **TOTAL CARRIED TO COLLECTION**				

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Bill № 4: Electrical Engineering Services



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**BASIC ELECTRICAL REQUIREMENTS** 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	**Fixing and Repairing** 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 ***Rate or Lump Sum in Words:***	LS	1		
1.1.2	Wires and cables ***Rate or Lump Sum in Words:***	LS			
1.1.3	Sockets and switches ***Rate or Lump Sum in Words:***	LS	1		
1.1.4	Circuit breakers ***Rate or Lump Sum in Words:***	LS			
1.1.5	Disconnecting switches ***Rate or Lump Sum in Words:***	LS			
	BASIC ELECTRICAL REQUIREMENTS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**PANELBOARDS**				
2.2	**Computer Lab Panel Board (Rehabilitation)**				
2.2.1	Rehabilitate and install the Computer Lab Panel Board, works to include: - Rehabilitation and connection - Wires installation - Accessories - All Accessories Failed Complete to shop drawings and to the satisfaction of the engineer (ready to use) ***Rate or Lump Sum in Words:***	№			
2.3a New Item	Supply and Install New Panel Board Cover ***Rate or Lump Sum in Words:***	№			
	PANELBOARDS **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**GENERAL LIGHTING INSTALLATIONS**				
3.1	**Lighting Fixtures** 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 φ ≥ 0.9 ***Rate or Lump Sum in Words:***	№	11		
3.1.2	Replace existing lighting fixtures with C1 ***Rate or Lump Sum in Words:***	№	7		
3.1.3	TYPE C2: as same as TYPE C1 but Pendent mounted ***Rate or Lump Sum in Words:***	№			
3.1.4	TYPE A2 / A3: 600x600 mm LED Panel 3600lm, 33W, 4000K, 80CRI surface-mount/recessed, die-cast aluminum, IP20 ***Rate or Lump Sum in Words:***	№	13		
3.1.5	TYPE A1: as same as TYPE A2 but Pendent mounted ***Rate or Lump Sum in Words:***	№			
3.1.6	TYPE N4 / N3: LED - 900lm - 12.5W - 3000K - 80CRI - WW Surface mounted / Recessed Downlight Round - 120 deg ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3.1.7	TYPE F: PLAFONIERA OVAL Wall mounted - IP54 Aluminum die-cast housing IK 06 - CLASS I Lamp SHOULD BE LED 900Lm, 4000K, 17W. ***Rate or Lump Sum in Words:***	№			
3.1.8	TYPE W: A++ / COB LED 3000K 230V CRI 90 - 3955lm - 42W IP65 - IK07 - Die-cast EN AB-47100 aluminum housing with high corrosion resistance. ***Rate or Lump Sum in Words:***	№			
3.1.9	TYPE L (LED): OVAL 18W 516Lm IP54 IK06 FOR LIFT & TECHNICAL SHAFTS. Wall mounted luminaire Aluminum die cast housing in EN AB-47100 (low copper content) with high resistance against corrosion. IK 06 Sand blasted glass diffuser. Lamp fixed position. LOR 43% Isolation: CLASS I. Black (cod.09). Lamp not included. ***Rate or Lump Sum in Words:***	№			
3.1.10	Replace Existing lighting fixtures with TYPE L (LED) ***Rate or Lump Sum in Words:***	№			
3.1.11	TYPE M: LED - 1500lm - 17W - 4000K - 80CRI - Ceiling mounted - With Motion Sensor. ***Rate or Lump Sum in Words:***	№			
3.1.12	Replace Existing lighting fixtures with TYPE M ***Rate or Lump Sum in Words:***	№			
3.1.13	TYPE EM: Ceiling Emergency Ceiling mounted non-maintained 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65. ***Rate or Lump Sum in Words:***	№			



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3.1.14	Replace Existing EM with LED Emergency ***Rate or Lump Sum in Words:***	№			
3.1.15	TYPE EM: Wall Emergency Wall mounted non-maintained, 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65. ***Rate or Lump Sum in Words:***	№			
3.1.16	TYPE EX: Exit sign LED light wall/ceiling mounted maintained, 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65 with engraved letters on fixtures ***Rate or Lump Sum in Words:***	№			
3.1.17	Replace Existing Exit with LED Exits ***Rate or Lump Sum in Words:***	№			
3.1.18	TYPE H: High Bay LED Lightning fixture pendent 100W, 220V, 50Hz. ***Rate or Lump Sum in Words:***	№			
	GENERAL LIGHTING INSTALLATIONS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
4	**FIRE ALARM SYSTEM**				
	FIRE ALARM SYSTEM **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**DATA SYSTEM**				
	DATA SYSTEM **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
6	**UNINTERRUPTIBLE POWER SUPPLY (UPS)**				
	UNINTERRUPTIBLE POWER SUPPLY (UPS) TOTAL CARRIED TO COLLECTION				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
7	**CCTV SYSTEM** Supply, install, connect and test CCTV system complete with conduits installations from the location of the NVR through the different CCTV camera outlets, including the pull or draw boxes and derivation boxes, the junction and outlet boxes, 19" Rack, and all necessary connections to the management station as shown on drawings as per Tender Specifications and the like to the satisfaction of the supervision engineer.				
7.3a New Item	Replace existing Cameras by new one Similar to existing ***Rate or Lump Sum in Words:***	№			
	CCTV SYSTEM **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8	**SOLAR SYSTEM**				
8.1	Supply, install, connect and test the solar lighting system for all Electrical Loads (excluding Lifts, Pumps and AC Units) in perfect operating conditions, including but not limited to: - Photovoltaic multi-crystalline solar panels as shown on the drawings. - Hybrid Inverter - All cables, wires, conduits and all necessary accessories - Aluminum PV mountings - The Contractor shall ensure complete solar system which should function as the main Power Supply - The Contractor should submit detailed shop drawings and materials for approval. - For all blocks of the schools - Lithium Batteries for (Off-Grid Solar Types) - All necessary elevated structures on roof and other areas which are needed to install the required solar panel as mentioned on drawings (Sheds, Parking, etc.) areas ***Rate or Lump Sum in Words:***	LS			
8.1.2a	Replace Unfuctional Battery by new one similar to existing				
8.1.2.1a	Deye BOS-G 51.2 kWh High-Voltage $LiFePO_4$ Battery Energy Storage System – Complete Supply, Installation, Testing & Commissioning ***Rate or Lump Sum in Words:***	№	11		
8.1.2.1b	Deye BOS-GM5.1 HV $LiFePO_4$ Battery, 51.2 V, 100 Ah, 5.12 kWh, including installation, testing and commissioning ***Rate or Lump Sum in Words:***	№			
8.1.2.1c	Acid Battery, 12 V, 250 Ah ***Rate or Lump Sum in Words:***	№			
	SOLAR SYSTEM **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9	**BELL SYSTEM**				
	BELL SYSTEM **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10	**LIFTS REHABILITATION**				
10.1	Rehabilitation of the 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: 650kg Speed: 1.5mps Entrance size/ type: 1100 mm wide single speed center opening ***Rate or Lump Sum in Words:***	№			
	LIFTS REHABILITATION **TOTAL CARRIED TO COLLECTION**				

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General Summary
990-Kamed El Laouz Intermediate Public School



General Summary

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Bill № 2: Civil and Architectural Works



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**SITE PREPARATION AND DEMOLITION**				
1.1	**Demolishing and Removal of Debris**				
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. ***Rate or Lump Sum in Words:***	LS	1		
1.1a New Item	**Dismantling** The works include the dismantling works related to the newly installed water tanks and prefabricated units. - The contractor shall deliver the dismantled items to the Building administration / MEHE. ***Rate or Lump Sum in Words:***				
1.1.1.a New Item	Water Tanks ***Rate or Lump Sum in Words:***	№			
1.1.1.b New Item	Prefabricated Units ***Rate or Lump Sum in Words:***	№			
1.1.1.c New Item	Partitions of any type ***Rate or Lump Sum in Words:***	m2	60		
	SITE PREPARATION AND DEMOLITION **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**EXTERNAL WORKS**				
2.4 2.4.2	**School Fences with Related Gates** Rehabilitate Existing Fence (Strengthening & Rehabilitation) Work to include - Rehabilitate and support all the existing fence as per drawings - Determine the places that requires support - Preparation of shop drawings - Replace all broken elements - Redo all damaged elements and to be similar to existing elements - Finishing works as existing (plastering, paints, stone cladding, etc.) - Rehabilitate existing steel protection (Replace all damaged part by new similar to existing and paint with epoxy as specified) - Replace existing chain link by new one (Galvanized) - Reconstruct the broken and damaged parts and rehabilitate as it was with all similar materials including steel parts with related epoxy paint as per the engineer instructions ***Rate or Lump Sum in Words:***	m			
2.5 2.5.1	**Ramp for External Existing Sidewalk** 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 ***Rate or Lump Sum in Words:***	LS			
	EXTERNAL WORKS **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**CONCRETE** **Not Applicable**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
4	**MASONRY**				
	SITE PREPARATION AND DEMOLITION **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**METAL WORKS**				
5.1	**Provide New Steel Work (Door & Windows)**				
5.1.3	Provide new double glazed aluminum windows with new burglar proof protection ***Rate or Lump Sum in Words:***	№			
5.2	**Rehabilitate and Maintain the Existing Steel Work (Burglar Proof Protection + Opening)** 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 ***Rate or Lump Sum in Words:***	№			
5.2.7b New Item	Rehabilitate existing steel doors work to include all door accessories such as lock, handle and all necessary accessories. ***Rate or Lump Sum in Words:***	№			
5.5a New Item	**Steel Handrail** - Provide new metal handrail similar to exist with all all necessary accessories - Apply one layer of epoxy base paint - Apply putty - Apply epoxy paint as per specification All needed items as per the Engineer instructions				
5.5.1a New Item	Above Parapet ***Rate or Lump Sum in Words:***	m			
	METAL WORKS **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
6	**WOOD AND PLASTICS**				
6.1	**Joinery Works**				
6.1.1	**Rehabilitate Existing Kitchen Cupboards** 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 ***Rate or Lump Sum in Words:***	m			
6.1.2	**Rehabilitate Timber Cupboard** Rehabilitate timber cupboards with plastic laminate color, work to include sub framing, drawer units, shelves, fixing and fastening hardware, heavy duty ironmongery, accessories, including finish, soft close, painting and all other related auxiliaries works as required by engineer - 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. - (No patching is allowed for existing wooden works) ***Rate or Lump Sum in Words:***	m^2			
	WOOD AND PLASTICS **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
7	**THERMAL AND MOISTURE PROTECTION**				
7.0	**Preliminaries**				
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 ***Rate or Lump Sum in Words:***	LS			
7.1 7.1.1	**Roof Waterproofing** 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 & debris - 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/m³ where required - Provide Geotextile layers - Provide all aluminum flashing with mastic - Provide finishing material as required - All as specified and approved shop drawings ***Rate or Lump Sum in Words:***	m²			
	THERMAL AND MOISTURE PROTECTION **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8	**DOOR AND WINDOWS**				
8.1	**Wooden Doors and Windows** 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	**Timber Doors** 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				
8.1.1.2	Provide new single leaf wooden door with view frame ***Rate or Lump Sum in Words:***	№			
8.1.1.5	Provide new toilet doors with related accessories as per specifications ***Rate or Lump Sum in Words:***	№			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.1.3	**Rehabilitate the Existing Timber Doors** 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.				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.1.3.1.1	Rehabilitate and paint existing single leaf timber doors with related accessories ***Rate or Lump Sum in Words:***	№	3		
8.1.3.1.5a New Item	Supply and install wooden doors accessories (Handle - Lock - Etc…) ***Rate or Lump Sum in Words:***	№			
8.1.3.1.6a New Item	Replace broken glass of the wooden door view access window ***Rate or Lump Sum in Words:***	№			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
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)				
8.2.1.1	Provide new aluminum double glazed window & door panel ***Rate or Lump Sum in Words:***	№			
8.2.1.4	Replace existing elements by new single glazed aluminum windows (6mm) if the quantity of broken glass does not exceed 30% of whole building ***Rate or Lump Sum in Words:***	№			
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. ***Rate or Lump Sum in Words:***	№			
8.2.2.2	Provide new single glazed aluminum partition double leaf door ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
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 ***Rate or Lump Sum in Words:***	№	4		
8.2.3.1a New Item	Rehabilitate existing Doors ***Rate or Lump Sum in Words:***	№			
8.2.3.2a New Item	Rehabilitate existing aluminum Doors / Windows with all related accessories without Glass ***Rate or Lump Sum in Words:***	№			
	DOOR AND WINDOWS **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9	**FINISHES**				
9.1	**Cement Plaster** 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 9.1.1.1	**Internal and External Plaster Works** 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. ***Rate or Lump Sum in Words:***	m^2			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.1.2	**Repair of Existing Plaster (Internal - External) (Cracks, etc.)**				
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. Fill 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			



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2	**Tiling Works (Similar to existing)** 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				
9.2.2 9.2.2.1	**New Glazed Colored Ceramic for Walls** Supply and install glazed colored ceramic for walls Include Ceramic Corner (first choice) ***Rate or Lump Sum in Words:***	m²			
9.2.4 9.2.4.1	**Repair existing broken floor tiles and skirting (all types) and reinstall by new, similar to existing for all rooms and corridors** 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. ***Rate or Lump Sum in Words:***	LS			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2.4a New Item	**<u>Repair existing broken tiles (all types) and reinstall by new, similar to existing for toilets, drinking Basin and kitchen</u>**				
9.2.4.1a New Item	Rehabilitate and repair all damaged and broken tiles, 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. ***Rate or Lump Sum in Words:***	m²			
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				
9.2.7.2	Type 2: Ceramic ***Rate or Lump Sum in Words:***	m²			
9.2.7.3	Type 3: Mosaic ***Rate or Lump Sum in Words:***	m²			
9.2.7.5	Type 5: Skirting (any type and size) ***Rate or Lump Sum in Words:***	m			
9.2.7.8a New Item	Type 8: Terrazzo ***Rate or Lump Sum in Words:***	m²			
9.2.7.10a New Item	Type 10: Dismantling of the existing Faux parquet, Rehabilitate, Clean and Rub the Existing any type of flooring tiles and skirting ***Rate or Lump Sum in Words:***	m²			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2.8	**<u>Clean the Existing Decorative Wall Tiles</u>** Rehabilitate any type of decorative wall tiles (mosaic - marble - etc.) Work to include: - All materials and labors - Grouting - Polish and rubbing - All needed items as per the Engineer instruction. - Works to be executed by experts				
9.2.8.4	Type 4: Terrazzo ***Rate or Lump Sum in Words:***	m²			
9.2.9	**<u>Colored PVC for Covered Indoor KG Playgrounds</u>** Supply and install first class safe and antibacterial colored P.V.C. flooring for indoor KG playgrounds at least 6mm thick (Design shape and colors of vinyl flooring should be approved by engineer prior to installation) Work to include: - Shop drawing for design, shape and colors of vinyl flooring should be submitted for each classroom separately for engineer approval - Laminate existing finish flooring after removing vinyl by special concrete material level - Make good and smooth the flooring - Apply self leveling special materials(if needed) to assume Vinyl best finishing - Remove all the existing skirting - Treat the place of the existing skirting - Place the special glue as specified - Place the flooring and screw the skirting P.V.C. profile Labors and materials, screw, etc. All needed items as per the Engineer instructions and approval. <u>Note</u>: Work should be executed by experts and should be executed in presence and approval of supervision engineer and as per required specifications for materials and executions. ***Rate or Lump Sum in Words:***	m²			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.3	**Suspended Ceilings (Similar to existing)** 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 specifications - 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	**Metal Sheet Strips Suspended Ceilings:**				
9.3.1.2	60 x 60 cm Aluminum Suspended Ceiling ***Rate or Lump Sum in Words:***	m²			
9.4	**Gypsum Works (Similar to existing)**				
9.4.2	**Rehabilitate Existing Gypsum Suspended Ceiling (Tiles, Panels)**				
9.4.2.1	Rehabilitate existing gypsum board suspended ceiling n the case of damage or during construction. Works to include material, labor, equipment, etc. and to the engineer's approval ***Rate or Lump Sum in Words:***	m²			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.5	**Painting**				
9.5.1	**Wall and Ceilings Paint Works** 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, ***All paint types must be lead-free and Low VOC (Volatile Organic Compounds)***				
9.5.1.1	Super Rubber Paint for new walls and ceilings ***Rate or Lump Sum in Words:***	m²			
9.5.1.2	Super Rubber Paint for old walls and ceilings ***Rate or Lump Sum in Words:***	m²	300		
9.5.1.3	Oil Paint for new walls and ceilings ***Rate or Lump Sum in Words:***	m²			
9.5.1.4	Oil Paints for old walls and ceilings ***Rate or Lump Sum in Words:***	m²	775		

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
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. ***Rate or Lump Sum in Words:***	m²			
9.5.6	**<u>Epoxy coating (Playground -covered indoor Car Parking)</u>**				
9.5.6.5a New Item	For Roof ***Rate or Lump Sum in Words:***	m²			
	FINISHES **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10	**SPECIALTIES**				
10.1	**Bathrooms Accessories** - 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				
10.1.1 10.1.1.1	**Paper Roller Holder** Supply and install paper holder no rust, no stain stainless steel 316 with all accessories and fixation (anti-rust materials) for good quality and at the places shown on drawings All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	№ 			
10.1.2 10.1.2.1	**Soap Dispenser** Supply and install stainless steel 316 no rust, no stain, soap dispenser wall type fixation (anti-rust materials and accessories) with all needed items All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	 № 			
10.1.3 10.1.3.1	**Paper Holder Box** Supply and install paper holder box from stainless steel 316 no rust, no stain, with all needed works and fixation (anti-rust materials and accessories) The box should be from a good manufacturer All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	 № 			
10.1.4	**Mirror for Lavatories** 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 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) ***Rate or Lump Sum in Words:***	№ 			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10.1.5	**<u>Handicapped Bathroom Accessories</u>** - Remove and cart away old damaged fixtures Supply and install all needed bars for the handicapped toilet of stainless steel 316 Work to include: - Materials - Labors - and all needed items as per the Engineer instructions				
10.1.5.1	Supply and install vertical grab rail 60cm bars ***Rate or Lump Sum in Words:***	№			
10.1.5.2	Supply and install Horizontal grab rail 60cm bars ***Rate or Lump Sum in Words:***	№			
10.1.5.3	Supply and install Drop Down Rail removable arm 80cm ***Rate or Lump Sum in Words:***	№			
10.1.5.4	Alarm pull cord for emergency ***Rate or Lump Sum in Words:***	№			
10.1.5.5a New Item	Supply and install partition between urinals similar to existing with all needed fixation accessories ***Rate or Lump Sum in Words:***	№			
10.2	**Classroom Specialties**				
10.2.1 10.2.1.1	**<u>White Teaching Boards</u>** Supply and install White teaching boards from approved manufacturer as per specifications of Ministry of Education and Higher Education and corresponding to the site Cost to include: - (3600mm x 1200mm) final dimensions as per site limitation - Materials and labors - Felt marker pens and eraser (12 marker pens + 2 erases for each white board) - Stainless Steel screws - Remove the existing board - All needed works as per the Engineer instructions ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10.3	**Resin Work**				
10.3.1	**Drinking Basin** 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) ***Rate or Lump Sum in Words:***	№			
10.3.1.7a New Item	Rehabilitation of existing Drinking Basin - Any Length (Traps, Taps, Cleaning and repair of any damaged elements) ***Rate or Lump Sum in Words:***	№			
10.3.4	**Kitchen Counter** 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				
10.3.4.3	Kitchen Counter - Length (1.76 to 2.05 m) ***Rate or Lump Sum in Words:***	№			
10.5	**Internal Curtains** Supply and install internal rolling type tissue and polyester collapsible type curtain as per specifications and at the location as shown on drawings Works to include: - Materials - Labors - Heavy Duty Accessories - All needed works as per the Engineer instructions and approval				
10.5.1	On External Opening ***Rate or Lump Sum in Words:***	m²	10		
	SPECIALITIES **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
11	**EQUIPMENT**				
	EQUIPMENT **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
12	**FURNISHINGS**				
12.1	**INSTITUTIONAL FURNITURE** Supply and install the following institutional furniture complete including all necessary fixing and accessories, all as specified, shown on the drawings and to the satisfaction of the Engineer.				
12.1.1	**Classrooms Furniture**				
12.1.1.1	Standard desk with chair for classroom, single seat. ***Rate or Lump Sum in Words:***	№			
12.1.2	**Conference Room Furniture**				
12.1.2.1	Standard table. ***Rate or Lump Sum in Words:***	№			
12.1.2.2	Standard chairs. ***Rate or Lump Sum in Words:***	№			
12.1.6 12.1.6.1	**Hooks with Rails for Hats and Coats** Hooks with rails for hats and coats, rail size 120mm high x 20mm thick, softwood, treated and painted, countersunk screwed to wall & painted steel hooks every 200 mm (5№ hooks per linear meter of rail). ***Rate or Lump Sum in Words:***	lm			
	FURNISHINGS **TOTAL CARRIED TO COLLECTION**				

Collection

Page №		Amount (US $)
2.1	SITE PREPARATION AND DEMOLITION	.....
2.2	EXTERNAL WORKS	.....
2.3	CONCRETE	.....
2.4	MASONRY	.....
2.5	METAL WORKS	.....
2.6	WOOD AND PLASTICS	.....
2.7	THERMAL AND MOISTURE PROTECTION	.....
2.8	DOOR AND WINDOWS	.....
2.9	FINISHES	.....
2.10	SPECIALTIES	.....
2.11	EQUIPMENT	.....
2.12	FURNISHINGS	.....
	Total Carried to General Summary	.....

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Bill № 3: Mechanical Engineering Services



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**GENERAL TECHNICAL REQUIREMENTS**				
1.1	**General Mechanical Requirements**				
1.1.1	Revise all Mechanical drawings and make sure that they can be executed properly. ***Rate or Lump Sum in Words:***	Item			
1.2	**Rehabilitation Works General Requirements** 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, floor drains, roof drains, manholes, pumps, WC tanks, adding where applicable all necessary valves, flush valves, etc., and all other necessary works. ***Rate or Lump Sum in Words:***	Item	1		
1.2.2	Maintenance and rehabilitation of existing HVAC & fire fighting systems, including all necessary piping, duct works, pumps and controls, fans, mechanical works inside shafts, air conditioning units, etc. ***Rate or Lump Sum in Words:***	Item			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1.2.3a New Item	Contractor Shall remove existing, newly added showers. Works to include - Removal of fixtures (Shower head or hand) - Replacement of damaged tiles by new one similar to existing. All other nessessary works (Finishes and mechanical works) ***Rate or Lump Sum in Words:***	№			
1.2.4a New Item	Contractor Shall remove existing, newly added Water Heater . Works to include - Removal of all pipes and accessories - Replacement of damaged tiles by new one similar to existing. All other nessessary works (Finishes and mechanical works) ***Rate or Lump Sum in Words:***	№			
	GENERAL TECHNICAL REQUIREMENTS **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION**				
2.3	**Drain Cover** Supply and install floor drain cover (P.E) 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 Engineer instructions				
2.3.1	Cover for FCO ***Rate or Lump Sum in Words:***	№			
	SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**WATER PIPE WORK INSTALLATION**				
3.2	**Electrical Water Heater** Electrical water heater as specified and scheduled; include pipe work connections, temperature and pressure gauges, control and power wiring from the MCC, hot water and pipe work connections, control and high limit control valves, isolation and safety valves, thermal insulation, valve boxes, bonding and identification, and the heater should be of a good trade mark of European or west made or first class Lebanese product.				
3.2.2	EWH-02 (100 L) ***Rate or Lump Sum in Words:***	№			
	WATER PIPE WORK INSTALLATION TOTAL CARRIED TO COLLECTION				
4	**FIRE PROTECTION**				
	FIRE PROTECTION TOTAL CARRIED TO COLLECTION				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**SANITARY FIXTURES**				
5.2	**W.C. For Non Kids** 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 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)				
5.2.1	EWC-01 (Wall Hang - 52 x 36 cm) ***Rate or Lump Sum in Words:***	№			
5.2.3a New Item	EWC Accessories (Seat Cover - Flush Tank Cover / Push Button Etc…) ***Rate or Lump Sum in Words:***	№			
5.4	**Lavatories for Non Kids** Supply and install semi pedestal wash basin similar to Ideal Standard No. 742001 or approved equal 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) ***Rate or Lump Sum in Words:***	№			
5.4.2	LAV-02 (wall hang, handicapped with mixers 56 x 41 cm) ***Rate or Lump Sum in Words:***	№			
5.4.3a	LAV accessories (Traps - Mixers - Fixation, Etc…) ***Rate or Lump Sum in Words:***	№			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5.5	**Urinal** Supply and installation of high quality urinal units complete with proper wall fixation with anti-dust materials including drainage & water supply connection as per the approved shop drawings. Cost to include all necessary accessories, valves, sensors to provide workable system.				
5.5.1	Urinal ***Rate or Lump Sum in Words:***	№			
5.6	**Self Close Taps on Kids & Students Lavatories** Supply and install self close taps to be fixed in the lavatory body as manufactured by Grohe Item No. 36-173 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 ***Rate or Lump Sum in Words:***	№			
5.7	**Wall Type Self Close Taps on Drinking Basins** Supply and install self close taps to be fixed in the drinking basin body as manufactured by Grohe Item No. 36-176 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 ***Rate or Lump Sum in Words:***	№			
5.8	**Kitchen Sink Accessories** Supply and install kitchen sink accessories such as chrome trap, angle valve, mixers as specified				
5.8.1	Kitchen Sink Accessories ***Rate or Lump Sum in Words:***	№			



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5.10	**Lavatories Resin Accessories** Supply and install lavatories resin accessories such as chrome trap, angle valves as specified				
5.10.1	Lavatories Resin Accessories ***Rate or Lump Sum in Words:***	№			
5.14	**Hose Bib** Supply and install Hose Bib taps including water connection & all necessary accessories as required				
5.14.1	HB - 01 ***Rate or Lump Sum in Words:***	№			
5.14.2a New Item	Maintenace of Potable Water System Contractor shall ensure proper functionality of the system ***Rate or Lump Sum in Words:***	Item			
5.14.3a New Item	Rehabilitation of existing septic tank, including cleaning, crack and joint sealing, waterproofing, replacement of damaged fittings, and all necessary works to restore watertightness and proper operation ***Rate or Lump Sum in Words:***	Item			
	SANITARY FIXTURES **TOTAL CARRIED TO COLLECTION**				

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	Total Carried to General Summary	.....

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Bill № 4: Electrical Engineering Services



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**BASIC ELECTRICAL REQUIREMENTS** 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	**Fixing and Repairing** 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 ***Rate or Lump Sum in Words:***	LS	1		
1.1.2	Wires and cables ***Rate or Lump Sum in Words:***	LS			
1.1.3	Sockets and switches ***Rate or Lump Sum in Words:***	LS	1		
1.1.4	Circuit breakers ***Rate or Lump Sum in Words:***	LS			
1.1.5	Disconnecting switches ***Rate or Lump Sum in Words:***	LS			
	BASIC ELECTRICAL REQUIREMENTS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**PANELBOARDS**				
2.2	**Computer Lab Panel Board (Rehabilitation)**				
2.2.1	Rehabilitate and install the Computer Lab Panel Board, works to include: - Rehabilitation and connection - Wires installation - Accessories - All Accessories Failed Complete to shop drawings and to the satisfaction of the engineer (ready to use) ***Rate or Lump Sum in Words:***	№			
2.3a New Item	Supply and Install New Panel Board Cover ***Rate or Lump Sum in Words:***	№			
	PANELBOARDS **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**GENERAL LIGHTING INSTALLATIONS**				
3.1	**Lighting Fixtures** 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 φ ≥ 0.9 ***Rate or Lump Sum in Words:***	№			
3.1.2	Replace existing lighting fixtures with C1 ***Rate or Lump Sum in Words:***	№			
3.1.3	TYPE C2: as same as TYPE C1 but Pendent mounted ***Rate or Lump Sum in Words:***	№			
3.1.4	TYPE A2 / A3: 600x600 mm LED Panel 3600lm, 33W, 4000K, 80CRI surface-mount/recessed, die-cast aluminum, IP20 ***Rate or Lump Sum in Words:***	№			
3.1.5	TYPE A1: as same as TYPE A2 but Pendent mounted ***Rate or Lump Sum in Words:***	№			
3.1.6	TYPE N4 / N3: LED - 900lm - 12.5W - 3000K - 80CRI - WW Surface mounted / Recessed Downlight Round - 120 deg ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3.1.7	TYPE F: PLAFONIERA OVAL Wall mounted - IP54 Aluminum die-cast housing IK 06 - CLASS I Lamp SHOULD BE LED 900Lm, 4000K, 17W. ***Rate or Lump Sum in Words:***	№			
3.1.8	TYPE W: A++ / COB LED 3000K 230V CRI 90 - 3955lm - 42W IP65 - IK07 - Die-cast EN AB-47100 aluminum housing with high corrosion resistance. ***Rate or Lump Sum in Words:***	№			
3.1.9	TYPE L (LED): OVAL 18W 516Lm IP54 IK06 FOR LIFT & TECHNICAL SHAFTS. Wall mounted luminaire Aluminum die cast housing in EN AB-47100 (low copper content) with high resistance against corrosion. IK 06 Sand blasted glass diffuser. Lamp fixed position. LOR 43% Isolation: CLASS I. Black (cod.09). Lamp not included. ***Rate or Lump Sum in Words:***	№			
3.1.10	Replace Existing lighting fixtures with TYPE L (LED) ***Rate or Lump Sum in Words:***	№			
3.1.11	TYPE M: LED - 1500lm - 17W - 4000K - 80CRI - Ceiling mounted - With Motion Sensor. ***Rate or Lump Sum in Words:***	№			
3.1.12	Replace Existing lighting fixtures with TYPE M ***Rate or Lump Sum in Words:***	№			
3.1.13	TYPE EM: Ceiling Emergency Ceiling mounted non-maintained 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65. ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3.1.14	Replace Existing EM with LED Emergency ***Rate or Lump Sum in Words:***	№			
3.1.15	TYPE EM: Wall Emergency Wall mounted non-maintained, 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65. ***Rate or Lump Sum in Words:***	№			
3.1.16	TYPE EX: Exit sign LED light wall/ceiling mounted maintained, 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65 with engraved letters on fixtures ***Rate or Lump Sum in Words:***	№			
3.1.17	Replace Existing Exit with LED Exits ***Rate or Lump Sum in Words:***	№			
3.1.18	TYPE H: High Bay LED Lightning fixture pendent 100W, 220V, 50Hz. ***Rate or Lump Sum in Words:***	№			
	GENERAL LIGHTING INSTALLATIONS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
4	**FIRE ALARM SYSTEM**				
	FIRE ALARM SYSTEM **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**DATA SYSTEM**				
	DATA SYSTEM **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
6	**UNINTERRUPTIBLE POWER SUPPLY (UPS)**				
	UNINTERRUPTIBLE POWER SUPPLY (UPS) TOTAL CARRIED TO COLLECTION				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
7	**CCTV SYSTEM** Supply, install, connect and test CCTV system complete with conduits installations from the location of the NVR through the different CCTV camera outlets, including the pull or draw boxes and derivation boxes, the junction and outlet boxes, 19" Rack, and all necessary connections to the management station as shown on drawings as per Tender Specifications and the like to the satisfaction of the supervision engineer.				
7.3a New Item	Replace existing Cameras by new one Similar to existing ***Rate or Lump Sum in Words:***	№			
	CCTV SYSTEM **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8	**SOLAR SYSTEM**				
8.1	Supply, install, connect and test the solar lighting system for all Electrical Loads (excluding Lifts, Pumps and AC Units) in perfect operating conditions, including but not limited to: - Photovoltaic multi-crystalline solar panels as shown on the drawings. - Hybrid Inverter - All cables, wires, conduits and all necessary accessories - Aluminum PV mountings - The Contractor shall ensure complete solar system which should function as the main Power Supply - The Contractor should submit detailed shop drawings and materials for approval. - For all blocks of the schools - Lithium Batteries for (Off-Grid Solar Types) - All necessary elevated structures on roof and other areas which are needed to install the required solar panel as mentioned on drawings (Sheds, Parking, etc.) areas ***Rate or Lump Sum in Words:***	LS			
8.1.2a	Replace Unfuctional Battery by new one similar to existing				
8.1.2.1a	Deye BOS-G 51.2 kWh High-Voltage $LiFePO_4$ Battery Energy Storage System – Complete Supply, Installation, Testing & Commissioning ***Rate or Lump Sum in Words:***	№			
8.1.2.1b	Deye BOS-GM5.1 HV $LiFePO_4$ Battery, 51.2 V, 100 Ah, 5.12 kWh, including installation, testing and commissioning ***Rate or Lump Sum in Words:***	№			
8.1.2.1c	Acid Battery, 12 V, 250 Ah ***Rate or Lump Sum in Words:***	№			
	SOLAR SYSTEM **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9	**BELL SYSTEM**				
	BELL SYSTEM **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10	**LIFTS REHABILITATION**				
10.1	Rehabilitation of the 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: 650kg Speed: 1.5mps Entrance size/ type: 1100 mm wide single speed center opening ***Rate or Lump Sum in Words:***	№			
	LIFTS REHABILITATION **TOTAL CARRIED TO COLLECTION**				

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General Summary
991-Kamed El Laouz Secondary Public School



General Summary

Description	Amount (US $)
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* Discount by Tenderer (_____ %) ……	
* Total Amount of Tender (VAT Not Applicable) ……	

* Total Amount of Tender in Words:

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Bill № 2: Civil and Architectural Works



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**SITE PREPARATION AND DEMOLITION**				
1.1	**Demolishing and Removal of Debris**				
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. ***Rate or Lump Sum in Words:***	LS	1		
1.1a New Item	**Dismantling** The works include the dismantling works related to the newly installed water tanks and prefabricated units. - The contractor shall deliver the dismantled items to the Building administration / MEHE. ***Rate or Lump Sum in Words:***				
1.1.1.a New Item	Water Tanks ***Rate or Lump Sum in Words:***	№			
1.1.1.b New Item	Prefabricated Units ***Rate or Lump Sum in Words:***	№	2		
1.1.1.c New Item	Partitions of any type ***Rate or Lump Sum in Words:***	m2			
	SITE PREPARATION AND DEMOLITION **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**EXTERNAL WORKS**				
2.4 2.4.2	**School Fences with Related Gates** Rehabilitate Existing Fence (Strengthening & Rehabilitation) Work to include - Rehabilitate and support all the existing fence as per drawings - Determine the places that requires support - Preparation of shop drawings - Replace all broken elements - Redo all damaged elements and to be similar to existing elements - Finishing works as existing (plastering, paints, stone cladding, etc.) - Rehabilitate existing steel protection (Replace all damaged part by new similar to existing and paint with epoxy as specified) - Replace existing chain link by new one (Galvanized) - Reconstruct the broken and damaged parts and rehabilitate as it was with all similar materials including steel parts with related epoxy paint as per the engineer instructions ***Rate or Lump Sum in Words:***	m			
2.5 2.5.1	**Ramp for External Existing Sidewalk** 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 ***Rate or Lump Sum in Words:***	LS			
	EXTERNAL WORKS **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**CONCRETE** **Not Applicable**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
4	**MASONRY**				
	SITE PREPARATION AND DEMOLITION TOTAL CARRIED TO COLLECTION				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**METAL WORKS**				
5.1	**Provide New Steel Work (Door & Windows)**				
5.1.3	Provide new double glazed aluminum windows with new burglar proof protection ***Rate or Lump Sum in Words:***	№			
5.2	**Rehabilitate and Maintain the Existing Steel Work (Burglar Proof Protection + Opening)** 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 ***Rate or Lump Sum in Words:***	№			
5.2.7b New Item	Rehabilitate existing steel doors work to include all door accessories such as lock, handle and all necessary accessories. ***Rate or Lump Sum in Words:***	№			
5.5a New Item	**Steel Handrail** - Provide new metal handrail similar to exist with all all necessary accessories - Apply one layer of epoxy base paint - Apply putty - Apply epoxy paint as per specification All needed items as per the Engineer instructions				
5.5.1a New Item	Above Parapet ***Rate or Lump Sum in Words:***	m			
	METAL WORKS **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
6	**WOOD AND PLASTICS**				
6.1	**Joinery Works**				
6.1.1	**Rehabilitate Existing Kitchen Cupboards** 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 ***Rate or Lump Sum in Words:***	m			
6.1.2	**Rehabilitate Timber Cupboard** Rehabilitate timber cupboards with plastic laminate color, work to include sub framing, drawer units, shelves, fixing and fastening hardware, heavy duty ironmongery, accessories, including finish, soft close, painting and all other related auxiliaries works as required by engineer - 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. - (No patching is allowed for existing wooden works) ***Rate or Lump Sum in Words:***	m^2			
	WOOD AND PLASTICS **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
7	**THERMAL AND MOISTURE PROTECTION**				
7.0	**Preliminaries**				
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 ***Rate or Lump Sum in Words:***	LS			
7.1 7.1.1	**Roof Waterproofing** 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 & debris - 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/m³ where required - Provide Geotextile layers - Provide all aluminum flashing with mastic - Provide finishing material as required - All as specified and approved shop drawings ***Rate or Lump Sum in Words:***	m²			
	THERMAL AND MOISTURE PROTECTION **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8	**DOOR AND WINDOWS**				
8.1	**Wooden Doors and Windows** 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	**Timber Doors** 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				
8.1.1.2	Provide new single leaf wooden door with view frame ***Rate or Lump Sum in Words:***	№			
8.1.1.5	Provide new toilet doors with related accessories as per specifications ***Rate or Lump Sum in Words:***	№			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.1.3	**Rehabilitate the Existing Timber Doors** 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.				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.1.3.1.1	Rehabilitate and paint existing single leaf timber doors with related accessories ***Rate or Lump Sum in Words:***	№	10		
8.1.3.1.5a New Item	Supply and install wooden doors accessories (Handle - Lock - Etc…) ***Rate or Lump Sum in Words:***	№	7		
8.1.3.1.6a New Item	Replace broken glass of the wooden door view access window ***Rate or Lump Sum in Words:***	№			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
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)				
8.2.1.1	Provide new aluminum double glazed window & door panel ***Rate or Lump Sum in Words:***	№			
8.2.1.4	Replace existing elements by new single glazed aluminum windows (6mm) if the quantity of broken glass does not exceed 30% of whole building ***Rate or Lump Sum in Words:***	№	4		
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. ***Rate or Lump Sum in Words:***	№			
8.2.2.2	Provide new single glazed aluminum partition double leaf door ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
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 ***Rate or Lump Sum in Words:***	№	4		
8.2.3.1a New Item	Rehabilitate existing Doors ***Rate or Lump Sum in Words:***	№			
8.2.3.2a New Item	Rehabilitate existing aluminum Doors / Windows with all related accessories without Glass ***Rate or Lump Sum in Words:***	№	2		
	DOOR AND WINDOWS **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9	**FINISHES**				
9.1	**Cement Plaster** 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 9.1.1.1	**Internal and External Plaster Works** 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. ***Rate or Lump Sum in Words:***	m^2			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.1.2	**Repair of Existing Plaster (Internal - External) (Cracks, etc.)**				
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. Fill 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			



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2	**Tiling Works (Similar to existing)** 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				
9.2.2 9.2.2.1	**New Glazed Colored Ceramic for Walls** Supply and install glazed colored ceramic for walls Include Ceramic Corner (first choice) ***Rate or Lump Sum in Words:***	m²	50		
9.2.4 9.2.4.1	**Repair existing broken floor tiles and skirting (all types) and reinstall by new, similar to existing for all rooms and corridors** 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. ***Rate or Lump Sum in Words:***	LS			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2.4a New Item	**<u>Repair existing broken tiles (all types) and reinstall by new, similar to existing for toilets, drinking Basin and kitchen</u>**				
9.2.4.1a New Item	Rehabilitate and repair all damaged and broken tiles, 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. ***Rate or Lump Sum in Words:***	m²	30		
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				
9.2.7.2	Type 2: Ceramic ***Rate or Lump Sum in Words:***	m²			
9.2.7.3	Type 3: Mosaic ***Rate or Lump Sum in Words:***	m²			
9.2.7.5	Type 5: Skirting (any type and size) ***Rate or Lump Sum in Words:***	m			
9.2.7.8a New Item	Type 8: Terrazzo ***Rate or Lump Sum in Words:***	m²			
9.2.7.10a New Item	Type 10: Dismantling of the existing Faux parquet, Rehabilitate, Clean and Rub the Existing any type of flooring tiles and skirting ***Rate or Lump Sum in Words:***	m²			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2.8	**Clean the Existing Decorative Wall Tiles** Rehabilitate any type of decorative wall tiles (mosaic - marble - etc.) Work to include: - All materials and labors - Grouting - Polish and rubbing - All needed items as per the Engineer instruction. - Works to be executed by experts				
9.2.8.4	Type 4: Terrazzo ***Rate or Lump Sum in Words:***	m²			
9.2.9	**Colored PVC for Covered Indoor KG Playgrounds** Supply and install first class safe and antibacterial colored P.V.C. flooring for indoor KG playgrounds at least 6mm thick (Design shape and colors of vinyl flooring should be approved by engineer prior to installation) Work to include: - Shop drawing for design, shape and colors of vinyl flooring should be submitted for each classroom separately for engineer approval - Laminate existing finish flooring after removing vinyl by special concrete material level - Make good and smooth the flooring - Apply self leveling special materials(if needed) to assume Vinyl best finishing - Remove all the existing skirting - Treat the place of the existing skirting - Place the special glue as specified - Place the flooring and screw the skirting P.V.C. profile Labors and materials, screw, etc. All needed items as per the Engineer instructions and approval. Note: Work should be executed by experts and should be executed in presence and approval of supervision engineer and as per required specifications for materials and executions. ***Rate or Lump Sum in Words:***	m²			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.3	**Suspended Ceilings (Similar to existing)** 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 specifications - 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	**Metal Sheet Strips Suspended Ceilings:**				
9.3.1.2	60 x 60 cm Aluminum Suspended Ceiling ***Rate or Lump Sum in Words:***	m^2			
9.4	**Gypsum Works (Similar to existing)**				
9.4.2 9.4.2.1	**Rehabilitate Existing Gypsum Suspended Ceiling (Tiles, Panels)** Rehabilitate existing gypsum board suspended ceiling n the case of damage or during construction. Works to include material, labor, equipment, etc. and to the engineer's approval ***Rate or Lump Sum in Words:***	m^2			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.5	**Painting**				
9.5.1	**Wall and Ceilings Paint Works** 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, ***All paint types must be lead-free and Low VOC (Volatile Organic Compounds)***				
9.5.1.1	Super Rubber Paint for new walls and ceilings ***Rate or Lump Sum in Words:***	m²			
9.5.1.2	Super Rubber Paint for old walls and ceilings ***Rate or Lump Sum in Words:***	m²	400		
9.5.1.3	Oil Paint for new walls and ceilings ***Rate or Lump Sum in Words:***	m²			
9.5.1.4	Oil Paints for old walls and ceilings ***Rate or Lump Sum in Words:***	m²	1,000		

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.5.2 9.5.2.1	**<u>Outside Walls Paint (Old and New Walls and Ceilings)</u>** 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. ***Rate or Lump Sum in Words:***	m^2			
9.5.6	**<u>Epoxy coating (Playground -covered indoor Car Parking)</u>**				
9.5.6.5a New Item	For Roof ***Rate or Lump Sum in Words:***	m^2			
	FINISHES **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10	**SPECIALTIES**				
10.1	**Bathrooms Accessories** - 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				
10.1.1 10.1.1.1	**Paper Roller Holder** Supply and install paper holder no rust, no stain stainless steel 316 with all accessories and fixation (anti-rust materials) for good quality and at the places shown on drawings All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	№ 			
10.1.2 10.1.2.1	**Soap Dispenser** Supply and install stainless steel 316 no rust, no stain, soap dispenser wall type fixation (anti-rust materials and accessories) with all needed items All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	 № 			
10.1.3 10.1.3.1	**Paper Holder Box** Supply and install paper holder box from stainless steel 316 no rust, no stain, with all needed works and fixation (anti-rust materials and accessories) The box should be from a good manufacturer All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	 № 			
10.1.4	**Mirror for Lavatories** 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 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) ***Rate or Lump Sum in Words:***	№ 			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10.1.5	**<u>Handicapped Bathroom Accessories</u>** - Remove and cart away old damaged fixtures Supply and install all needed bars for the handicapped toilet of stainless steel 316 Work to include: - Materials - Labors - and all needed items as per the Engineer instructions				
10.1.5.1	Supply and install vertical grab rail 60cm bars ***Rate or Lump Sum in Words:***	№			
10.1.5.2	Supply and install Horizontal grab rail 60cm bars ***Rate or Lump Sum in Words:***	№			
10.1.5.3	Supply and install Drop Down Rail removable arm 80cm ***Rate or Lump Sum in Words:***	№			
10.1.5.4	Alarm pull cord for emergency ***Rate or Lump Sum in Words:***	№			
10.1.5.5a New Item	Supply and install partition between urinals similar to existing with all needed fixation accessories ***Rate or Lump Sum in Words:***	№			
10.2	**Classroom Specialties**				
10.2.1 10.2.1.1	**<u>White Teaching Boards</u>** Supply and install White teaching boards from approved manufacturer as per specifications of Ministry of Education and Higher Education and corresponding to the site Cost to include: - (3600mm x 1200mm) final dimensions as per site limitation - Materials and labors - Felt marker pens and eraser (12 marker pens + 2 erases for each white board) - Stainless Steel screws - Remove the existing board - All needed works as per the Engineer instructions ***Rate or Lump Sum in Words:***	№ 1			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10.3	**Resin Work**				
10.3.1	**Drinking Basin** 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) ***Rate or Lump Sum in Words:***	№			
10.3.1.7a New Item	Rehabilitation of existing Drinking Basin - Any Length (Traps, Taps, Cleaning and repair of any damaged elements) ***Rate or Lump Sum in Words:***	№			
10.3.4	**Kitchen Counter** 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				
10.3.4.3	Kitchen Counter - Length (1.76 to 2.05 m) ***Rate or Lump Sum in Words:***	№			
10.5	**Internal Curtains** Supply and install internal rolling type tissue and polyester collapsible type curtain as per specifications and at the location as shown on drawings Works to include: - Materials - Labors - Heavy Duty Accessories - All needed works as per the Engineer instructions and approval				
10.5.1	On External Opening ***Rate or Lump Sum in Words:***	m²	50		
	SPECIALTIES **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
11	**EQUIPMENT**				
	EQUIPMENT **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
12	**FURNISHINGS**				
12.1	**INSTITUTIONAL FURNITURE** Supply and install the following institutional furniture complete including all necessary fixing and accessories, all as specified, shown on the drawings and to the satisfaction of the Engineer.				
12.1.1	**Classrooms Furniture**				
12.1.1.1	Standard desk with chair for classroom, single seat. ***Rate or Lump Sum in Words:***	№			
12.1.2	**Conference Room Furniture**				
12.1.2.1	Standard table. ***Rate or Lump Sum in Words:***	№			
12.1.2.2	Standard chairs. ***Rate or Lump Sum in Words:***	№			
12.1.6 12.1.6.1	**Hooks with Rails for Hats and Coats** Hooks with rails for hats and coats, rail size 120mm high x 20mm thick, softwood, treated and painted, countersunk screwed to wall & painted steel hooks every 200 mm (5№ hooks per linear meter of rail). ***Rate or Lump Sum in Words:***	lm			
	FURNISHINGS **TOTAL CARRIED TO COLLECTION**				

Collection

Page №		Amount (US $)
2.1	SITE PREPARATION AND DEMOLITION	.....
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Bill № 3: Mechanical Engineering Services



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**GENERAL TECHNICAL REQUIREMENTS**				
1.1	**General Mechanical Requirements**				
1.1.1	Revise all Mechanical drawings and make sure that they can be executed properly. ***Rate or Lump Sum in Words:***	Item			
1.2	**Rehabilitation Works General Requirements** 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, floor drains, roof drains, manholes, pumps, WC tanks, adding where applicable all necessary valves, flush valves, etc., and all other necessary works. ***Rate or Lump Sum in Words:***	Item	1		
1.2.2	Maintenance and rehabilitation of existing HVAC & fire fighting systems, including all necessary piping, duct works, pumps and controls, fans, mechanical works inside shafts, air conditioning units, etc. ***Rate or Lump Sum in Words:***	Item			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1.2.3a New Item	Contractor Shall remove existing, newly added showers. Works to include - Removal of fixtures (Shower head or hand) - Replacement of damaged tiles by new one similar to existing. All other nessessary works (Finishes and mechanical works) ***Rate or Lump Sum in Words:***	№			
1.2.4a New Item	Contractor Shall remove existing, newly added Water Heater . Works to include - Removal of all pipes and accessories - Replacement of damaged tiles by new one similar to existing. All other nessessary works (Finishes and mechanical works) ***Rate or Lump Sum in Words:***	№			
	GENERAL TECHNICAL REQUIREMENTS **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION**				
2.3	**Drain Cover** Supply and install floor drain cover (P.E) 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 Engineer instructions				
2.3.1	Cover for FCO ***Rate or Lump Sum in Words:***	№			
	SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**WATER PIPE WORK INSTALLATION**				
3.2	**Electrical Water Heater** Electrical water heater as specified and scheduled; include pipe work connections, temperature and pressure gauges, control and power wiring from the MCC, hot water and pipe work connections, control and high limit control valves, isolation and safety valves, thermal insulation, valve boxes, bonding and identification, and the heater should be of a good trade mark of European or west made or first class Lebanese product.				
3.2.2	EWH-02 (100 L) ***Rate or Lump Sum in Words:***	№			
	WATER PIPE WORK INSTALLATION **TOTAL CARRIED TO COLLECTION**				
4	**FIRE PROTECTION**				
	FIRE PROTECTION **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**SANITARY FIXTURES**				
5.2	**W.C. For Non Kids** 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 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)				
5.2.1	EWC-01 (Wall Hang - 52 x 36 cm) ***Rate or Lump Sum in Words:***	№			
5.2.3a New Item	EWC Accessories (Seat Cover - Flush Tank Cover / Push Button Etc…) ***Rate or Lump Sum in Words:***	№	4		
5.4	**Lavatories for Non Kids** Supply and install semi pedestal wash basin similar to Ideal Standard No. 742001 or approved equal 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) ***Rate or Lump Sum in Words:***	№			
5.4.2	LAV-02 (wall hang, handicapped with mixers 56 x 41 cm) ***Rate or Lump Sum in Words:***	№			
5.4.3a	LAV accessories (Traps - Mixers - Fixation, Etc…) ***Rate or Lump Sum in Words:***	№			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5.5	**<u>Urinal</u>** Supply and installation of high quality urinal units complete with proper wall fixation with anti-dust materials including drainage & water supply connection as per the approved shop drawings. Cost to include all necessary accessories, valves, sensors to provide workable system.				
5.5.1	Urinal ***Rate or Lump Sum in Words:***	№			
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 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 ***Rate or Lump Sum in Words:***	№			
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 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 ***Rate or Lump Sum in Words:***	№			
5.8	**<u>Kitchen Sink Accessories</u>** Supply and install kitchen sink accessories such as chrome trap, angle valve, mixers as specified				
5.8.1	Kitchen Sink Accessories ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5.10	**Lavatories Resin Accessories** Supply and install lavatories resin accessories such as chrome trap, angle valves as specified				
5.10.1	Lavatories Resin Accessories ***Rate or Lump Sum in Words:***	№			
5.14	**Hose Bib** Supply and install Hose Bib taps including water connection & all necessary accessories as required				
5.14.1	HB - 01 ***Rate or Lump Sum in Words:***	№			
5.14.2a New Item	Maintenace of Potable Water System Contractor shall ensure proper functionality of the system ***Rate or Lump Sum in Words:***	Item			
5.14.3a New Item	Rehabilitation of existing septic tank, including cleaning, crack and joint sealing, waterproofing, replacement of damaged fittings, and all necessary works to restore watertightness and proper operation ***Rate or Lump Sum in Words:***	Item			
	SANITARY FIXTURES **TOTAL CARRIED TO COLLECTION**				

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Bill № 4: Electrical Engineering Services



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**BASIC ELECTRICAL REQUIREMENTS** 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	**Fixing and Repairing** 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 ***Rate or Lump Sum in Words:***	LS	1		
1.1.2	Wires and cables ***Rate or Lump Sum in Words:***	LS			
1.1.3	Sockets and switches ***Rate or Lump Sum in Words:***	LS	1		
1.1.4	Circuit breakers ***Rate or Lump Sum in Words:***	LS			
1.1.5	Disconnecting switches ***Rate or Lump Sum in Words:***	LS			
	BASIC ELECTRICAL REQUIREMENTS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**PANELBOARDS**				
2.2	**Computer Lab Panel Board (Rehabilitation)**				
2.2.1	Rehabilitate and install the Computer Lab Panel Board, works to include: - Rehabilitation and connection - Wires installation - Accessories - All Accessories Failed Complete to shop drawings and to the satisfaction of the engineer (ready to use) ***Rate or Lump Sum in Words:***	№			
2.3a New Item	Supply and Install New Panel Board Cover ***Rate or Lump Sum in Words:***	№			
	PANELBOARDS **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**GENERAL LIGHTING INSTALLATIONS**				
3.1	**Lighting Fixtures** 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 φ ≥ 0.9 ***Rate or Lump Sum in Words:***	№	4		
3.1.2	Replace existing lighting fixtures with C1 ***Rate or Lump Sum in Words:***	№			
3.1.3	TYPE C2: as same as TYPE C1 but Pendent mounted ***Rate or Lump Sum in Words:***	№			
3.1.4	TYPE A2 / A3: 600x600 mm LED Panel 3600lm, 33W, 4000K, 80CRI surface-mount/recessed, die-cast aluminum, IP20 ***Rate or Lump Sum in Words:***	№			
3.1.5	TYPE A1: as same as TYPE A2 but Pendent mounted ***Rate or Lump Sum in Words:***	№			
3.1.6	TYPE N4 / N3: LED - 900lm - 12.5W - 3000K - 80CRI - WW Surface mounted / Recessed Downlight Round - 120 deg ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3.1.7	TYPE F: PLAFONIERA OVAL Wall mounted - IP54 Aluminum die-cast housing IK 06 - CLASS I Lamp SHOULD BE LED 900Lm, 4000K, 17W. ***Rate or Lump Sum in Words:***	№			
3.1.8	TYPE W: A++ / COB LED 3000K 230V CRI 90 - 3955lm - 42W IP65 - IK07 - Die-cast EN AB-47100 aluminum housing with high corrosion resistance. ***Rate or Lump Sum in Words:***	№			
3.1.9	TYPE L (LED): OVAL 18W 516Lm IP54 IK06 FOR LIFT & TECHNICAL SHAFTS. Wall mounted luminaire Aluminum die cast housing in EN AB-47100 (low copper content) with high resistance against corrosion. IK 06 Sand blasted glass diffuser. Lamp fixed position. LOR 43% Isolation: CLASS I. Black (cod.09). Lamp not included. ***Rate or Lump Sum in Words:***	№			
3.1.10	Replace Existing lighting fixtures with TYPE L (LED) ***Rate or Lump Sum in Words:***	№			
3.1.11	TYPE M: LED - 1500lm - 17W - 4000K - 80CRI - Ceiling mounted - With Motion Sensor. ***Rate or Lump Sum in Words:***	№			
3.1.12	Replace Existing lighting fixtures with TYPE M ***Rate or Lump Sum in Words:***	№			
3.1.13	TYPE EM: Ceiling Emergency Ceiling mounted non-maintained 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65. ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3.1.14	Replace Existing EM with LED Emergency ***Rate or Lump Sum in Words:***	№			
3.1.15	TYPE EM: Wall Emergency Wall mounted non-maintained, 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65. ***Rate or Lump Sum in Words:***	№			
3.1.16	TYPE EX: Exit sign LED light wall/ceiling mounted maintained, 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65 with engraved letters on fixtures ***Rate or Lump Sum in Words:***	№			
3.1.17	Replace Existing Exit with LED Exits ***Rate or Lump Sum in Words:***	№			
3.1.18	TYPE H: High Bay LED Lightning fixture pendent 100W, 220V, 50Hz. ***Rate or Lump Sum in Words:***	№			
	GENERAL LIGHTING INSTALLATIONS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
4	**FIRE ALARM SYSTEM**				
	FIRE ALARM SYSTEM **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**DATA SYSTEM**				
	DATA SYSTEM **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
6	**UNINTERRUPTIBLE POWER SUPPLY (UPS)**				
	UNINTERRUPTIBLE POWER SUPPLY (UPS) TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
7	**CCTV SYSTEM** Supply, install, connect and test CCTV system complete with conduits installations from the location of the NVR through the different CCTV camera outlets, including the pull or draw boxes and derivation boxes, the junction and outlet boxes, 19" Rack, and all necessary connections to the management station as shown on drawings as per Tender Specifications and the like to the satisfaction of the supervision engineer.				
7.3a New Item	Replace existing Cameras by new one Similar to existing ***Rate or Lump Sum in Words:***	№			
	CCTV SYSTEM **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8	**SOLAR SYSTEM**				
8.1	Supply, install, connect and test the solar lighting system for all Electrical Loads (excluding Lifts, Pumps and AC Units) in perfect operating conditions, including but not limited to: - Photovoltaic multi-crystalline solar panels as shown on the drawings. - Hybrid Inverter - All cables, wires, conduits and all necessary accessories - Aluminum PV mountings - The Contractor shall ensure complete solar system which should function as the main Power Supply - The Contractor should submit detailed shop drawings and materials for approval. - For all blocks of the schools - Lithium Batteries for (Off-Grid Solar Types) - All necessary elevated structures on roof and other areas which are needed to install the required solar panel as mentioned on drawings (Sheds, Parking, etc.) areas ***Rate or Lump Sum in Words:***	LS			
8.1.2a	Replace Unfuctional Battery by new one similar to existing				
8.1.2.1a	Deye BOS-G 51.2 kWh High-Voltage $LiFePO_4$ Battery Energy Storage System – Complete Supply, Installation, Testing & Commissioning ***Rate or Lump Sum in Words:***	№			
8.1.2.1b	Deye BOS-GM5.1 HV $LiFePO_4$ Battery, 51.2 V, 100 Ah, 5.12 kWh, including installation, testing and commissioning ***Rate or Lump Sum in Words:***	№			
8.1.2.1c	Acid Battery, 12 V, 250 Ah ***Rate or Lump Sum in Words:***	№			
	SOLAR SYSTEM **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9	**BELL SYSTEM**				
	BELL SYSTEM **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10	**LIFTS REHABILITATION**				
10.1	Rehabilitation of the 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: 650kg Speed: 1.5mps Entrance size/ type: 1100 mm wide single speed center opening ***Rate or Lump Sum in Words:***	№			
	LIFTS REHABILITATION **TOTAL CARRIED TO COLLECTION**				

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Collection

Page №		Amount (US $)
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General Summary
994-Ghazze Intermediate Public School



General Summary

Description	Amount (US $)
Bill № 2: Civil and Architectural Works ……	
Bill № 3: Mechanical Engineering Services ……	
Bill № 4: 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:

……

……

……

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Description

Bill № 2: Civil and Architectural Works

Bill № 3: Mechanical Engineering Services

Bill № 4: Electrical Engineering Services

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Bill № 2: Civil and Architectural Works



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**SITE PREPARATION AND DEMOLITION**				
1.1	**Demolishing and Removal of Debris**				
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. ***Rate or Lump Sum in Words:***	LS	1		
1.1a New Item	**Dismantling** The works include the dismantling works related to the newly installed water tanks and prefabricated units. - The contractor shall deliver the dismantled items to the Building administration / MEHE. ***Rate or Lump Sum in Words:***				
1.1.1.a New Item	Water Tanks ***Rate or Lump Sum in Words:***	№			
1.1.1.b New Item	Prefabricated Units ***Rate or Lump Sum in Words:***	№	2		
1.1.1.c New Item	Partitions of any type ***Rate or Lump Sum in Words:***	m2			
	SITE PREPARATION AND DEMOLITION **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**EXTERNAL WORKS**				
2.4 2.4.2	**School Fences with Related Gates** Rehabilitate Existing Fence (Strengthening & Rehabilitation) Work to include - Rehabilitate and support all the existing fence as per drawings - Determine the places that requires support - Preparation of shop drawings - Replace all broken elements - Redo all damaged elements and to be similar to existing elements - Finishing works as existing (plastering, paints, stone cladding, etc.) - Rehabilitate existing steel protection (Replace all damaged part by new similar to existing and paint with epoxy as specified) - Replace existing chain link by new one (Galvanized) - Reconstruct the broken and damaged parts and rehabilitate as it was with all similar materials including steel parts with related epoxy paint as per the engineer instructions ***Rate or Lump Sum in Words:***	m			
2.5 2.5.1	**Ramp for External Existing Sidewalk** 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 ***Rate or Lump Sum in Words:***	LS			
	EXTERNAL WORKS **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**CONCRETE** **Not Applicable**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
4	**MASONRY**				
	SITE PREPARATION AND DEMOLITION **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**METAL WORKS**				
5.1	**Provide New Steel Work (Door & Windows)**				
5.1.3	Provide new double glazed aluminum windows with new burglar proof protection ***Rate or Lump Sum in Words:***	№			
5.2	**Rehabilitate and Maintain the Existing Steel Work (Burglar Proof Protection + Opening)** 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 ***Rate or Lump Sum in Words:***	№			
5.2.7b New Item	Rehabilitate existing steel doors work to include all door accessories such as lock, handle and all necessary accessories. ***Rate or Lump Sum in Words:***	№	10		
5.5a New Item	**Steel Handrail** - Provide new metal handrail similar to exist with all all necessary accessories - Apply one layer of epoxy base paint - Apply putty - Apply epoxy paint as per specification All needed items as per the Engineer instructions				
5.5.1a New Item	Above Parapet ***Rate or Lump Sum in Words:***	m			
	METAL WORKS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
6	**WOOD AND PLASTICS**				
6.1	**Joinery Works**				
6.1.1	**Rehabilitate Existing Kitchen Cupboards** 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 ***Rate or Lump Sum in Words:***	m			
6.1.2	**Rehabilitate Timber Cupboard** Rehabilitate timber cupboards with plastic laminate color, work to include sub framing, drawer units, shelves, fixing and fastening hardware, heavy duty ironmongery, accessories, including finish, soft close, painting and all other related auxiliaries works as required by engineer - 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. - (No patching is allowed for existing wooden works) ***Rate or Lump Sum in Words:***	m^2			
	WOOD AND PLASTICS **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
7	**THERMAL AND MOISTURE PROTECTION**				
7.0	**Preliminaries**				
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 ***Rate or Lump Sum in Words:***	LS			
7.1 7.1.1	**Roof Waterproofing** 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 & debris - 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/m³ where required - Provide Geotextile layers - Provide all aluminum flashing with mastic - Provide finishing material as required - All as specified and approved shop drawings ***Rate or Lump Sum in Words:***	m²			
	THERMAL AND MOISTURE PROTECTION **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8	**DOOR AND WINDOWS**				
8.1	**Wooden Doors and Windows** 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	**Timber Doors** 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				
8.1.1.2	Provide new single leaf wooden door with view frame ***Rate or Lump Sum in Words:***	№			
8.1.1.5	Provide new toilet doors with related accessories as per specifications ***Rate or Lump Sum in Words:***	№			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.1.3	**Rehabilitate the Existing Timber Doors** 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.				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.1.3.1.1	Rehabilitate and paint existing single leaf timber doors with related accessories ***Rate or Lump Sum in Words:***	№	5		
8.1.3.1.5a New Item	Supply and install wooden doors accessories (Handle - Lock - Etc…) ***Rate or Lump Sum in Words:***	№	9		
8.1.3.1.6a New Item	Replace broken glass of the wooden door view access window ***Rate or Lump Sum in Words:***	№	2		



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.2	**Aluminum Doors and Windows** 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	**New Aluminum Panels (Double Glass)** Supply and install the fabricated aluminum panels with double glass (6 - 12 - 6 mm) (Outer Glass should be Tempered)				
8.2.1.1	Provide new aluminum double glazed window & door panel ***Rate or Lump Sum in Words:***	№			
8.2.1.4	Replace existing elements by new single glazed aluminum windows (6mm) if the quantity of broken glass does not exceed 30% of whole building ***Rate or Lump Sum in Words:***	№			
8.2.2	**New Aluminum Internal Door** 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. ***Rate or Lump Sum in Words:***	№			
8.2.2.2	Provide new single glazed aluminum partition double leaf door ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
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 ***Rate or Lump Sum in Words:***	№	5		
8.2.3.1a New Item	Rehabilitate existing Doors ***Rate or Lump Sum in Words:***	№			
8.2.3.2a New Item	Rehabilitate existing aluminum Doors / Windows with all related accessories without Glass ***Rate or Lump Sum in Words:***	№			
	DOOR AND WINDOWS **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9	**FINISHES**				
9.1	**Cement Plaster** 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 9.1.1.1	**Internal and External Plaster Works** 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. ***Rate or Lump Sum in Words:***	m^2			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.1.2	**Repair of Existing Plaster (Internal - External) (Cracks, etc.)**				
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. Fill 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		

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2	**Tiling Works (Similar to existing)** 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				
9.2.2 9.2.2.1	**New Glazed Colored Ceramic for Walls** Supply and install glazed colored ceramic for walls Include Ceramic Corner (first choice) ***Rate or Lump Sum in Words:***	m²			
9.2.4 9.2.4.1	**Repair existing broken floor tiles and skirting (all types) and reinstall by new, similar to existing for all rooms and corridors** 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. ***Rate or Lump Sum in Words:***	LS			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2.4a New Item	**<u>Repair existing broken tiles (all types) and reinstall by new, similar to existing for toilets, drinking Basin and kitchen</u>**				
9.2.4.1a New Item	Rehabilitate and repair all damaged and broken tiles, 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. ***Rate or Lump Sum in Words:***	m²			
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				
9.2.7.2	Type 2: Ceramic ***Rate or Lump Sum in Words:***	m²			
9.2.7.3	Type 3: Mosaic ***Rate or Lump Sum in Words:***	m²			
9.2.7.5	Type 5: Skirting (any type and size) ***Rate or Lump Sum in Words:***	m			
9.2.7.8a New Item	Type 8: Terrazzo ***Rate or Lump Sum in Words:***	m²			
9.2.7.10a New Item	Type 10: Dismantling of the existing Faux parquet, Rehabilitate, Clean and Rub the Existing any type of flooring tiles and skirting ***Rate or Lump Sum in Words:***	m²			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2.8	**<u>Clean the Existing Decorative Wall Tiles</u>** Rehabilitate any type of decorative wall tiles (mosaic - marble - etc.) Work to include: - All materials and labors - Grouting - Polish and rubbing - All needed items as per the Engineer instruction. - Works to be executed by experts				
9.2.8.4	Type 4: Terrazzo ***Rate or Lump Sum in Words:***	m²			
9.2.9	**<u>Colored PVC for Covered Indoor KG Playgrounds</u>** Supply and install first class safe and antibacterial colored P.V.C. flooring for indoor KG playgrounds at least 6mm thick (Design shape and colors of vinyl flooring should be approved by engineer prior to installation) Work to include: - Shop drawing for design, shape and colors of vinyl flooring should be submitted for each classroom separately for engineer approval - Laminate existing finish flooring after removing vinyl by special concrete material level - Make good and smooth the flooring - Apply self leveling special materials(if needed) to assume Vinyl best finishing - Remove all the existing skirting - Treat the place of the existing skirting - Place the special glue as specified - Place the flooring and screw the skirting P.V.C. profile Labors and materials, screw, etc. All needed items as per the Engineer instructions and approval. <u>Note</u>: Work should be executed by experts and should be executed in presence and approval of supervision engineer and as per required specifications for materials and executions. ***Rate or Lump Sum in Words:***	m²			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.3	**Suspended Ceilings (Similar to existing)** 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 specifications - 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	**Metal Sheet Strips Suspended Ceilings:**				
9.3.1.2	60 x 60 cm Aluminum Suspended Ceiling ***Rate or Lump Sum in Words:***	m²			
9.4	**Gypsum Works (Similar to existing)**				
9.4.2	**Rehabilitate Existing Gypsum Suspended Ceiling (Tiles, Panels)**				
9.4.2.1	Rehabilitate existing gypsum board suspended ceiling n the case of damage or during construction. Works to include material, labor, equipment, etc. and to the engineer's approval ***Rate or Lump Sum in Words:***	m²			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.5	**Painting**				
9.5.1	**Wall and Ceilings Paint Works** 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, ***All paint types must be lead-free and Low VOC (Volatile Organic Compounds)***				
9.5.1.1	Super Rubber Paint for new walls and ceilings ***Rate or Lump Sum in Words:***	m²			
9.5.1.2	Super Rubber Paint for old walls and ceilings ***Rate or Lump Sum in Words:***	m²	250		
9.5.1.3	Oil Paint for new walls and ceilings ***Rate or Lump Sum in Words:***	m²			
9.5.1.4	Oil Paints for old walls and ceilings ***Rate or Lump Sum in Words:***	m²	425		

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
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. ***Rate or Lump Sum in Words:***	m²			
9.5.6	**<u>Epoxy coating (Playground -covered indoor Car Parking)</u>**				
9.5.6.5a New Item	For Roof ***Rate or Lump Sum in Words:***	m²			
	FINISHES **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10	**SPECIALTIES**				
10.1	**Bathrooms Accessories** - 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				
10.1.1 10.1.1.1	**Paper Roller Holder** Supply and install paper holder no rust, no stain stainless steel 316 with all accessories and fixation (anti-rust materials) for good quality and at the places shown on drawings All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	№			
10.1.2 10.1.2.1	**Soap Dispenser** Supply and install stainless steel 316 no rust, no stain, soap dispenser wall type fixation (anti-rust materials and accessories) with all needed items All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	№			
10.1.3 10.1.3.1	**Paper Holder Box** Supply and install paper holder box from stainless steel 316 no rust, no stain, with all needed works and fixation (anti-rust materials and accessories) The box should be from a good manufacturer All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	№			
10.1.4	**Mirror for Lavatories** 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 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) ***Rate or Lump Sum in Words:***	№	5		

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10.1.5	**<u>Handicapped Bathroom Accessories</u>** - Remove and cart away old damaged fixtures Supply and install all needed bars for the handicapped toilet of stainless steel 316 Work to include: - Materials - Labors - and all needed items as per the Engineer instructions				
10.1.5.1	Supply and install vertical grab rail 60cm bars ***Rate or Lump Sum in Words:***	№			
10.1.5.2	Supply and install Horizontal grab rail 60cm bars ***Rate or Lump Sum in Words:***	№			
10.1.5.3	Supply and install Drop Down Rail removable arm 80cm ***Rate or Lump Sum in Words:***	№			
10.1.5.4	Alarm pull cord for emergency ***Rate or Lump Sum in Words:***	№			
10.1.5.5a New Item	Supply and install partition between urinals similar to existing with all needed fixation accessories ***Rate or Lump Sum in Words:***	№			
10.2	**Classroom Specialties**				
10.2.1 10.2.1.1	**<u>White Teaching Boards</u>** Supply and install White teaching boards from approved manufacturer as per specifications of Ministry of Education and Higher Education and corresponding to the site Cost to include: - (3600mm x 1200mm) final dimensions as per site limitation - Materials and labors - Felt marker pens and eraser (12 marker pens + 2 erases for each white board) - Stainless Steel screws - Remove the existing board - All needed works as per the Engineer instructions ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10.3	**Resin Work**				
10.3.1	**Drinking Basin** 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) ***Rate or Lump Sum in Words:***	№	2		
10.3.1.7a New Item	Rehabilitation of existing Drinking Basin - Any Length (Traps, Taps, Cleaning and repair of any damaged elements) ***Rate or Lump Sum in Words:***	№	2		
10.3.4	**Kitchen Counter** 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				
10.3.4.3	Kitchen Counter - Length (1.76 to 2.05 m) ***Rate or Lump Sum in Words:***	№			
10.5	**Internal Curtains** Supply and install internal rolling type tissue and polyester collapsible type curtain as per specifications and at the location as shown on drawings Works to include: - Materials - Labors - Heavy Duty Accessories - All needed works as per the Engineer instructions and approval				
10.5.1	On External Opening ***Rate or Lump Sum in Words:***	m²	60		
	SPECIALTIES **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
11	**EQUIPMENT**				
	EQUIPMENT **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
12	**FURNISHINGS**				
12.1	**INSTITUTIONAL FURNITURE** Supply and install the following institutional furniture complete including all necessary fixing and accessories, all as specified, shown on the drawings and to the satisfaction of the Engineer.				
12.1.1	**Classrooms Furniture**				
12.1.1.1	Standard desk with chair for classroom, single seat. ***Rate or Lump Sum in Words:***	№			
12.1.2	**Conference Room Furniture**				
12.1.2.1	Standard table. ***Rate or Lump Sum in Words:***	№			
12.1.2.2	Standard chairs. ***Rate or Lump Sum in Words:***	№			
12.1.6 12.1.6.1	**Hooks with Rails for Hats and Coats** Hooks with rails for hats and coats, rail size 120mm high x 20mm thick, softwood, treated and painted, countersunk screwed to wall & painted steel hooks every 200 mm (5№ hooks per linear meter of rail). ***Rate or Lump Sum in Words:***	lm			
	FURNISHINGS **TOTAL CARRIED TO COLLECTION**				

Collection

Page №		Amount (US $)
2.1	SITE PREPARATION AND DEMOLITION	.....
2.2	EXTERNAL WORKS	.....
2.3	CONCRETE	.....
2.4	MASONRY	.....
2.5	METAL WORKS	.....
2.6	WOOD AND PLASTICS	.....
2.7	THERMAL AND MOISTURE PROTECTION	.....
2.8	DOOR AND WINDOWS	.....
2.9	FINISHES	.....
2.10	SPECIALTIES	.....
2.11	EQUIPMENT	.....
2.12	FURNISHINGS	.....
	Total Carried to General Summary	.....

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Bill № 3: Mechanical Engineering Services



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**GENERAL TECHNICAL REQUIREMENTS**				
1.1	**General Mechanical Requirements**				
1.1.1	Revise all Mechanical drawings and make sure that they can be executed properly. ***Rate or Lump Sum in Words:***	Item			
1.2	**Rehabilitation Works General Requirements** 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, floor drains, roof drains, manholes, pumps, WC tanks, adding where applicable all necessary valves, flush valves, etc., and all other necessary works. ***Rate or Lump Sum in Words:***	Item	1		
1.2.2	Maintenance and rehabilitation of existing HVAC & fire fighting systems, including all necessary piping, duct works, pumps and controls, fans, mechanical works inside shafts, air conditioning units, etc. ***Rate or Lump Sum in Words:***	Item			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1.2.3a New Item	Contractor Shall remove existing, newly added showers. Works to include - Removal of fixtures (Shower head or hand) - Replacement of damaged tiles by new one similar to existing. All other nessessary works (Finishes and mechanical works) ***Rate or Lump Sum in Words:***	№			
1.2.4a New Item	Contractor Shall remove existing, newly added Water Heater . Works to include - Removal of all pipes and accessories - Replacement of damaged tiles by new one similar to existing. All other nessessary works (Finishes and mechanical works) ***Rate or Lump Sum in Words:***	№			
	GENERAL TECHNICAL REQUIREMENTS **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION**				
2.3	**Drain Cover** Supply and install floor drain cover (P.E) 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 Engineer instructions				
2.3.1	Cover for FCO ***Rate or Lump Sum in Words:***	№			
	SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**WATER PIPE WORK INSTALLATION**				
3.2	**Electrical Water Heater** Electrical water heater as specified and scheduled; include pipe work connections, temperature and pressure gauges, control and power wiring from the MCC, hot water and pipe work connections, control and high limit control valves, isolation and safety valves, thermal insulation, valve boxes, bonding and identification, and the heater should be of a good trade mark of European or west made or first class Lebanese product.				
3.2.2	EWH-02 (100 L) ***Rate or Lump Sum in Words:***	№			
	WATER PIPE WORK INSTALLATION TOTAL CARRIED TO COLLECTION				
4	**FIRE PROTECTION**				
	FIRE PROTECTION TOTAL CARRIED TO COLLECTION				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**SANITARY FIXTURES**				
5.2	**W.C. For Non Kids** 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 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)				
5.2.1	EWC-01 (Wall Hang - 52 x 36 cm) ***Rate or Lump Sum in Words:***	№			
5.2.3a New Item	EWC Accessories (Seat Cover - Flush Tank Cover / Push Button Etc…) ***Rate or Lump Sum in Words:***	№	5		
5.4	**Lavatories for Non Kids** Supply and install semi pedestal wash basin similar to Ideal Standard No. 742001 or approved equal 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) ***Rate or Lump Sum in Words:***	№			
5.4.2	LAV-02 (wall hang, handicapped with mixers 56 x 41 cm) ***Rate or Lump Sum in Words:***	№			
5.4.3a	LAV accessories (Traps - Mixers - Fixation, Etc…) ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5.5	**Urinal** Supply and installation of high quality urinal units complete with proper wall fixation with anti-dust materials including drainage & water supply connection as per the approved shop drawings. Cost to include all necessary accessories, valves, sensors to provide workable system.				
5.5.1	Urinal ***Rate or Lump Sum in Words:***	№			
5.6	**Self Close Taps on Kids & Students Lavatories** Supply and install self close taps to be fixed in the lavatory body as manufactured by Grohe Item No. 36-173 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 ***Rate or Lump Sum in Words:***	№			
5.7	**Wall Type Self Close Taps on Drinking Basins** Supply and install self close taps to be fixed in the drinking basin body as manufactured by Grohe Item No. 36-176 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 ***Rate or Lump Sum in Words:***	№	10		
5.8	**Kitchen Sink Accessories** Supply and install kitchen sink accessories such as chrome trap, angle valve, mixers as specified				
5.8.1	Kitchen Sink Accessories ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5.10	**Lavatories Resin Accessories** Supply and install lavatories resin accessories such as chrome trap, angle valves as specified				
5.10.1	Lavatories Resin Accessories ***Rate or Lump Sum in Words:***	№			
5.14	**Hose Bib** Supply and install Hose Bib taps including water connection & all necessary accessories as required				
5.14.1	HB - 01 ***Rate or Lump Sum in Words:***	№	7		
5.14.2a New Item	Maintenace of Potable Water System Contractor shall ensure proper functionality of the system ***Rate or Lump Sum in Words:***	Item			
5.14.3a New Item	Rehabilitation of existing septic tank, including cleaning, crack and joint sealing, waterproofing, replacement of damaged fittings, and all necessary works to restore watertightness and proper operation ***Rate or Lump Sum in Words:***	Item	1		
	SANITARY FIXTURES **TOTAL CARRIED TO COLLECTION**				

Collection

Page №		Amount (US $)
3.1	GENERAL TECHNICAL REQUIREMENTS	.....
3.2	SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION	.....
3.3	WATER PIPE WORK INSTALLATION	.....
3.4	FIRE PROTECTION	.....
3.5	SANITARY FIXTURES	.....
	Total Carried to General Summary	.....

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Bill № 4: Electrical Engineering Services



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**BASIC ELECTRICAL REQUIREMENTS** 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	**Fixing and Repairing** 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 ***Rate or Lump Sum in Words:***	LS	1		
1.1.2	Wires and cables ***Rate or Lump Sum in Words:***	LS			
1.1.3	Sockets and switches ***Rate or Lump Sum in Words:***	LS	1		
1.1.4	Circuit breakers ***Rate or Lump Sum in Words:***	LS			
1.1.5	Disconnecting switches ***Rate or Lump Sum in Words:***	LS			
	BASIC ELECTRICAL REQUIREMENTS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**PANELBOARDS**				
2.2	**Computer Lab Panel Board (Rehabilitation)**				
2.2.1	Rehabilitate and install the Computer Lab Panel Board, works to include: - Rehabilitation and connection - Wires installation - Accessories - All Accessories Failed Complete to shop drawings and to the satisfaction of the engineer (ready to use) ***Rate or Lump Sum in Words:***	№			
2.3a New Item	Supply and Install New Panel Board Cover ***Rate or Lump Sum in Words:***	№			
	PANELBOARDS **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**GENERAL LIGHTING INSTALLATIONS**				
3.1	**Lighting Fixtures** 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 φ ≥ 0.9 ***Rate or Lump Sum in Words:***	№			
3.1.2	Replace existing lighting fixtures with C1 ***Rate or Lump Sum in Words:***	№			
3.1.3	TYPE C2: as same as TYPE C1 but Pendent mounted ***Rate or Lump Sum in Words:***	№			
3.1.4	TYPE A2 / A3: 600x600 mm LED Panel 3600lm, 33W, 4000K, 80CRI surface-mount/recessed, die-cast aluminum, IP20 ***Rate or Lump Sum in Words:***	№			
3.1.5	TYPE A1: as same as TYPE A2 but Pendent mounted ***Rate or Lump Sum in Words:***	№			
3.1.6	TYPE N4 / N3: LED - 900lm - 12.5W - 3000K - 80CRI - WW Surface mounted / Recessed Downlight Round - 120 deg ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3.1.7	TYPE F: PLAFONIERA OVAL Wall mounted - IP54 Aluminum die-cast housing IK 06 - CLASS I Lamp SHOULD BE LED 900Lm, 4000K, 17W. ***Rate or Lump Sum in Words:***	№			
3.1.8	TYPE W: A++ / COB LED 3000K 230V CRI 90 - 3955lm - 42W IP65 - IK07 - Die-cast EN AB-47100 aluminum housing with high corrosion resistance. ***Rate or Lump Sum in Words:***	№			
3.1.9	TYPE L (LED): OVAL 18W 516Lm IP54 IK06 FOR LIFT & TECHNICAL SHAFTS. Wall mounted luminaire Aluminum die cast housing in EN AB-47100 (low copper content) with high resistance against corrosion. IK 06 Sand blasted glass diffuser. Lamp fixed position. LOR 43% Isolation: CLASS I. Black (cod.09). Lamp not included. ***Rate or Lump Sum in Words:***	№			
3.1.10	Replace Existing lighting fixtures with TYPE L (LED) ***Rate or Lump Sum in Words:***	№			
3.1.11	TYPE M: LED - 1500lm - 17W - 4000K - 80CRI - Ceiling mounted - With Motion Sensor. ***Rate or Lump Sum in Words:***	№			
3.1.12	Replace Existing lighting fixtures with TYPE M ***Rate or Lump Sum in Words:***	№			
3.1.13	TYPE EM: Ceiling Emergency Ceiling mounted non-maintained 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65. ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3.1.14	Replace Existing EM with LED Emergency ***Rate or Lump Sum in Words:***	№			
3.1.15	TYPE EM: Wall Emergency Wall mounted non-maintained, 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65. ***Rate or Lump Sum in Words:***	№			
3.1.16	TYPE EX: Exit sign LED light wall/ceiling mounted maintained, 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65 with engraved letters on fixtures ***Rate or Lump Sum in Words:***	№			
3.1.17	Replace Existing Exit with LED Exits ***Rate or Lump Sum in Words:***	№			
3.1.18	TYPE H: High Bay LED Lightning fixture pendent 100W, 220V, 50Hz. ***Rate or Lump Sum in Words:***	№			
	GENERAL LIGHTING INSTALLATIONS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
4	**FIRE ALARM SYSTEM**				
	FIRE ALARM SYSTEM TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**DATA SYSTEM**				
	DATA SYSTEM **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
6	**UNINTERRUPTIBLE POWER SUPPLY (UPS)**				
	UNINTERRUPTIBLE POWER SUPPLY (UPS) TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
7	**CCTV SYSTEM** Supply, install, connect and test CCTV system complete with conduits installations from the location of the NVR through the different CCTV camera outlets, including the pull or draw boxes and derivation boxes, the junction and outlet boxes, 19" Rack, and all necessary connections to the management station as shown on drawings as per Tender Specifications and the like to the satisfaction of the supervision engineer.				
7.3a New Item	Replace existing Cameras by new one Similar to existing ***Rate or Lump Sum in Words:***	№	1		
	CCTV SYSTEM **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8	**SOLAR SYSTEM**				
8.1	Supply, install, connect and test the solar lighting system for all Electrical Loads (excluding Lifts, Pumps and AC Units) in perfect operating conditions, including but not limited to: - Photovoltaic multi-crystalline solar panels as shown on the drawings. - Hybrid Inverter - All cables, wires, conduits and all necessary accessories - Aluminum PV mountings - The Contractor shall ensure complete solar system which should function as the main Power Supply - The Contractor should submit detailed shop drawings and materials for approval. - For all blocks of the schools - Lithium Batteries for (Off-Grid Solar Types) - All necessary elevated structures on roof and other areas which are needed to install the required solar panel as mentioned on drawings (Sheds, Parking, etc.) areas ***Rate or Lump Sum in Words:***	LS			
8.1.2a	Replace Unfuctional Battery by new one similar to existing				
8.1.2.1a	Deye BOS-G 51.2 kWh High-Voltage $LiFePO_4$ Battery Energy Storage System – Complete Supply, Installation, Testing & Commissioning ***Rate or Lump Sum in Words:***	№			
8.1.2.1b	Deye BOS-GM5.1 HV $LiFePO_4$ Battery, 51.2 V, 100 Ah, 5.12 kWh, including installation, testing and commissioning ***Rate or Lump Sum in Words:***	№			
8.1.2.1c	Acid Battery, 12 V, 250 Ah ***Rate or Lump Sum in Words:***	№			
	SOLAR SYSTEM **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9	**BELL SYSTEM**				
	BELL SYSTEM **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10	**LIFTS REHABILITATION**				
10.1	Rehabilitation of the 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: 650kg Speed: 1.5mps Entrance size/ type: 1100 mm wide single speed center opening ***Rate or Lump Sum in Words:***	№			
	LIFTS REHABILITATION **TOTAL CARRIED TO COLLECTION**				

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Collection

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General Summary
1006-Saghbine Secondary Public School



General Summary

Description	Amount (US $)
Bill № 2: Civil and Architectural Works ……	
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Bill № 4: Electrical Engineering Services ……	
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* Discount by Tenderer (_____ %) ……	
* Total Amount of Tender (VAT Not Applicable) ……	

* Total Amount of Tender in Words:

.....

.....

.....

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General Summary

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Bill № 2: Civil and Architectural Works



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**SITE PREPARATION AND DEMOLITION**				
1.1	**Demolishing and Removal of Debris**				
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. ***Rate or Lump Sum in Words:***	LS	1		
1.1a New Item	**Dismantling** The works include the dismantling works related to the newly installed water tanks and prefabricated units. - The contractor shall deliver the dismantled items to the Building administration / MEHE. ***Rate or Lump Sum in Words:***				
1.1.1.a New Item	Water Tanks ***Rate or Lump Sum in Words:***	№	1		
1.1.1.b New Item	Prefabricated Units ***Rate or Lump Sum in Words:***	№	4		
1.1.1.c New Item	Partitions of any type ***Rate or Lump Sum in Words:***	m2			
	SITE PREPARATION AND DEMOLITION **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**EXTERNAL WORKS**				
2.4 2.4.2	**School Fences with Related Gates** Rehabilitate Existing Fence (Strengthening & Rehabilitation) Work to include - Rehabilitate and support all the existing fence as per drawings - Determine the places that requires support - Preparation of shop drawings - Replace all broken elements - Redo all damaged elements and to be similar to existing elements - Finishing works as existing (plastering, paints, stone cladding, etc.) - Rehabilitate existing steel protection (Replace all damaged part by new similar to existing and paint with epoxy as specified) - Replace existing chain link by new one (Galvanized) - Reconstruct the broken and damaged parts and rehabilitate as it was with all similar materials including steel parts with related epoxy paint as per the engineer instructions ***Rate or Lump Sum in Words:***	m			
2.5 2.5.1	**Ramp for External Existing Sidewalk** 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 ***Rate or Lump Sum in Words:***	LS			
	EXTERNAL WORKS **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**CONCRETE** **Not Applicable**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
4	**MASONRY**				
	SITE PREPARATION AND DEMOLITION **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**METAL WORKS**				
5.1	**Provide New Steel Work (Door & Windows)**				
5.1.3	Provide new double glazed aluminum windows with new burglar proof protection ***Rate or Lump Sum in Words:***	№			
5.2	**Rehabilitate and Maintain the Existing Steel Work (Burglar Proof Protection + Opening)** 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 ***Rate or Lump Sum in Words:***	№	2		
5.2.7b New Item	Rehabilitate existing steel doors work to include all door accessories such as lock, handle and all necessary accessories. ***Rate or Lump Sum in Words:***	№			
5.5a New Item	**Steel Handrail** - Provide new metal handrail similar to exist with all all necessary accessories - Apply one layer of epoxy base paint - Apply putty - Apply epoxy paint as per specification All needed items as per the Engineer instructions				
5.5.1a New Item	Above Parapet ***Rate or Lump Sum in Words:***	m			
	METAL WORKS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
6	**WOOD AND PLASTICS**				
6.1	**Joinery Works**				
6.1.1	**Rehabilitate Existing Kitchen Cupboards** 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 ***Rate or Lump Sum in Words:***	m			
6.1.2	**Rehabilitate Timber Cupboard** Rehabilitate timber cupboards with plastic laminate color, work to include sub framing, drawer units, shelves, fixing and fastening hardware, heavy duty ironmongery, accessories, including finish, soft close, painting and all other related auxiliaries works as required by engineer - 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. - (No patching is allowed for existing wooden works) ***Rate or Lump Sum in Words:***	m²			
	WOOD AND PLASTICS **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
7	**THERMAL AND MOISTURE PROTECTION**				
7.0	**Preliminaries**				
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 ***Rate or Lump Sum in Words:***	LS			
7.1 7.1.1	**Roof Waterproofing** 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 & debris - 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/m³ where required - Provide Geotextile layers - Provide all aluminum flashing with mastic - Provide finishing material as required - All as specified and approved shop drawings ***Rate or Lump Sum in Words:***	m²			
	THERMAL AND MOISTURE PROTECTION **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8	**DOOR AND WINDOWS**				
8.1	**Wooden Doors and Windows** 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	**Timber Doors** 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				
8.1.1.2	Provide new single leaf wooden door with view frame ***Rate or Lump Sum in Words:***	№			
8.1.1.5	Provide new toilet doors with related accessories as per specifications ***Rate or Lump Sum in Words:***	№			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.1.3	**Rehabilitate the Existing Timber Doors** 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.				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.1.3.1.1	Rehabilitate and paint existing single leaf timber doors with related accessories ***Rate or Lump Sum in Words:***	№	4		
8.1.3.1.5a New Item	Supply and install wooden doors accessories (Handle - Lock - Etc…) ***Rate or Lump Sum in Words:***	№	6		
8.1.3.1.6a New Item	Replace broken glass of the wooden door view access window ***Rate or Lump Sum in Words:***	№			



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
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)				
8.2.1.1	Provide new aluminum double glazed window & door panel ***Rate or Lump Sum in Words:***	№			
8.2.1.4	Replace existing elements by new single glazed aluminum windows (6mm) if the quantity of broken glass does not exceed 30% of whole building ***Rate or Lump Sum in Words:***	№			
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. ***Rate or Lump Sum in Words:***	№			
8.2.2.2	Provide new single glazed aluminum partition double leaf door ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
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 ***Rate or Lump Sum in Words:***	№	7		
8.2.3.1a New Item	Rehabilitate existing Doors ***Rate or Lump Sum in Words:***	№	2		
8.2.3.2a New Item	Rehabilitate existing aluminum Doors / Windows with all related accessories without Glass ***Rate or Lump Sum in Words:***	№			
	DOOR AND WINDOWS **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9	**FINISHES**				
9.1	**Cement Plaster** 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 9.1.1.1	**Internal and External Plaster Works** 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. ***Rate or Lump Sum in Words:***	m^2			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.1.2	**Repair of Existing Plaster (Internal - External) (Cracks, etc.)**				
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. Fill 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		

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2	**Tiling Works (Similar to existing)** 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				
9.2.2 9.2.2.1	**New Glazed Colored Ceramic for Walls** Supply and install glazed colored ceramic for walls Include Ceramic Corner (first choice) ***Rate or Lump Sum in Words:***	m²			
9.2.4 9.2.4.1	**Repair existing broken floor tiles and skirting (all types) and reinstall by new, similar to existing for all rooms and corridors** 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. ***Rate or Lump Sum in Words:***	LS			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2.4a New Item	**<u>Repair existing broken tiles (all types) and reinstall by new, similar to existing for toilets, drinking Basin and kitchen</u>**				
9.2.4.1a New Item	Rehabilitate and repair all damaged and broken tiles, 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. ***Rate or Lump Sum in Words:***	m²			
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				
9.2.7.2	Type 2: Ceramic ***Rate or Lump Sum in Words:***	m²	60		
9.2.7.3	Type 3: Mosaic ***Rate or Lump Sum in Words:***	m²			
9.2.7.5	Type 5: Skirting (any type and size) ***Rate or Lump Sum in Words:***	m			
9.2.7.8a New Item	Type 8: Terrazzo ***Rate or Lump Sum in Words:***	m²			
9.2.7.10a New Item	Type 10: Dismantling of the existing Faux parquet, Rehabilitate, Clean and Rub the Existing any type of flooring tiles and skirting ***Rate or Lump Sum in Words:***	m²			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2.8	**<u>Clean the Existing Decorative Wall Tiles</u>** Rehabilitate any type of decorative wall tiles (mosaic - marble - etc.) Work to include: - All materials and labors - Grouting - Polish and rubbing - All needed items as per the Engineer instruction. - Works to be executed by experts				
9.2.8.4	Type 4: Terrazzo ***Rate or Lump Sum in Words:***	m²			
9.2.9	**<u>Colored PVC for Covered Indoor KG Playgrounds</u>** Supply and install first class safe and antibacterial colored P.V.C. flooring for indoor KG playgrounds at least 6mm thick (Design shape and colors of vinyl flooring should be approved by engineer prior to installation) Work to include: - Shop drawing for design, shape and colors of vinyl flooring should be submitted for each classroom separately for engineer approval - Laminate existing finish flooring after removing vinyl by special concrete material level - Make good and smooth the flooring - Apply self leveling special materials(if needed) to assume Vinyl best finishing - Remove all the existing skirting - Treat the place of the existing skirting - Place the special glue as specified - Place the flooring and screw the skirting P.V.C. profile Labors and materials, screw, etc. All needed items as per the Engineer instructions and approval. <u>Note</u>: Work should be executed by experts and should be executed in presence and approval of supervision engineer and as per required specifications for materials and executions. ***Rate or Lump Sum in Words:***	m²			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.3	**Suspended Ceilings (Similar to existing)** 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 specifications - 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	**Metal Sheet Strips Suspended Ceilings:**				
9.3.1.2	60 x 60 cm Aluminum Suspended Ceiling ***Rate or Lump Sum in Words:***	m²			
9.4	**Gypsum Works (Similar to existing)**				
9.4.2	**Rehabilitate Existing Gypsum Suspended Ceiling (Tiles, Panels)**				
9.4.2.1	Rehabilitate existing gypsum board suspended ceiling n the case of damage or during construction. Works to include material, labor, equipment, etc. and to the engineer's approval ***Rate or Lump Sum in Words:***	m²			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.5	**Painting**				
9.5.1	**Wall and Ceilings Paint Works** 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, ***All paint types must be lead-free and Low VOC (Volatile Organic Compounds)***				
9.5.1.1	Super Rubber Paint for new walls and ceilings ***Rate or Lump Sum in Words:***	m²	100		
9.5.1.2	Super Rubber Paint for old walls and ceilings ***Rate or Lump Sum in Words:***	m²	120		
9.5.1.3	Oil Paint for new walls and ceilings ***Rate or Lump Sum in Words:***	m²			
9.5.1.4	Oil Paints for old walls and ceilings ***Rate or Lump Sum in Words:***	m²	100		

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
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. ***Rate or Lump Sum in Words:***	m²	500		
9.5.6	**<u>Epoxy coating (Playground -covered indoor Car Parking)</u>**				
9.5.6.5a New Item	For Roof ***Rate or Lump Sum in Words:***	m²			
	FINISHES **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10	**SPECIALTIES**				
10.1	**Bathrooms Accessories** - 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				
10.1.1 10.1.1.1	**Paper Roller Holder** Supply and install paper holder no rust, no stain stainless steel 316 with all accessories and fixation (anti-rust materials) for good quality and at the places shown on drawings All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	№ №	 1		
10.1.2 10.1.2.1	**Soap Dispenser** Supply and install stainless steel 316 no rust, no stain, soap dispenser wall type fixation (anti-rust materials and accessories) with all needed items All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	 №			
10.1.3 10.1.3.1	**Paper Holder Box** Supply and install paper holder box from stainless steel 316 no rust, no stain, with all needed works and fixation (anti-rust materials and accessories) The box should be from a good manufacturer All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	 №			
10.1.4	**Mirror for Lavatories** 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 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) ***Rate or Lump Sum in Words:***	 №			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10.1.5	**<u>Handicapped Bathroom Accessories</u>** - Remove and cart away old damaged fixtures Supply and install all needed bars for the handicapped toilet of stainless steel 316 Work to include: - Materials - Labors - and all needed items as per the Engineer instructions				
10.1.5.1	Supply and install vertical grab rail 60cm bars ***Rate or Lump Sum in Words:***	№			
10.1.5.2	Supply and install Horizontal grab rail 60cm bars ***Rate or Lump Sum in Words:***	№			
10.1.5.3	Supply and install Drop Down Rail removable arm 80cm ***Rate or Lump Sum in Words:***	№			
10.1.5.4	Alarm pull cord for emergency ***Rate or Lump Sum in Words:***	№			
10.1.5.5a New Item	Supply and install partition between urinals similar to existing with all needed fixation accessories ***Rate or Lump Sum in Words:***	№			
10.2	**Classroom Specialties**				
10.2.1 10.2.1.1	**<u>White Teaching Boards</u>** Supply and install White teaching boards from approved manufacturer as per specifications of Ministry of Education and Higher Education and corresponding to the site Cost to include: - (3600mm x 1200mm) final dimensions as per site limitation - Materials and labors - Felt marker pens and eraser (12 marker pens + 2 erases for each white board) - Stainless Steel screws - Remove the existing board - All needed works as per the Engineer instructions ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10.3	**Resin Work**				
10.3.1	**Drinking Basin** 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) ***Rate or Lump Sum in Words:***	№			
10.3.1.7a New Item	Rehabilitation of existing Drinking Basin - Any Length (Traps, Taps, Cleaning and repair of any damaged elements) ***Rate or Lump Sum in Words:***	№	1		
10.3.4	**Kitchen Counter** 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				
10.3.4.3	Kitchen Counter - Length (1.76 to 2.05 m) ***Rate or Lump Sum in Words:***	№			
10.5	**Internal Curtains** Supply and install internal rolling type tissue and polyester collapsible type curtain as per specifications and at the location as shown on drawings Works to include: - Materials - Labors - Heavy Duty Accessories - All needed works as per the Engineer instructions and approval				
10.5.1	On External Opening ***Rate or Lump Sum in Words:***	m²			
	SPECIALTIES **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
11	**EQUIPMENT**				
	EQUIPMENT **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
12	**FURNISHINGS**				
12.1	**INSTITUTIONAL FURNITURE** Supply and install the following institutional furniture complete including all necessary fixing and accessories, all as specified, shown on the drawings and to the satisfaction of the Engineer.				
12.1.1	**Classrooms Furniture**				
12.1.1.1	Standard desk with chair for classroom, single seat. ***Rate or Lump Sum in Words:***	№			
12.1.2	**Conference Room Furniture**				
12.1.2.1	Standard table. ***Rate or Lump Sum in Words:***	№			
12.1.2.2	Standard chairs. ***Rate or Lump Sum in Words:***	№			
12.1.6 12.1.6.1	**Hooks with Rails for Hats and Coats** Hooks with rails for hats and coats, rail size 120mm high x 20mm thick, softwood, treated and painted, countersunk screwed to wall & painted steel hooks every 200 mm (5№ hooks per linear meter of rail). ***Rate or Lump Sum in Words:***	lm			
	FURNISHINGS **TOTAL CARRIED TO COLLECTION**				

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Bill № 3: Mechanical Engineering Services



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**GENERAL TECHNICAL REQUIREMENTS**				
1.1	**General Mechanical Requirements**				
1.1.1	Revise all Mechanical drawings and make sure that they can be executed properly. ***Rate or Lump Sum in Words:***	Item			
1.2	**Rehabilitation Works General Requirements** 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, floor drains, roof drains, manholes, pumps, WC tanks, adding where applicable all necessary valves, flush valves, etc., and all other necessary works. ***Rate or Lump Sum in Words:***	Item	1		
1.2.2	Maintenance and rehabilitation of existing HVAC & fire fighting systems, including all necessary piping, duct works, pumps and controls, fans, mechanical works inside shafts, air conditioning units, etc. ***Rate or Lump Sum in Words:***	Item			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1.2.3a New Item	Contractor Shall remove existing, newly added showers. Works to include - Removal of fixtures (Shower head or hand) - Replacement of damaged tiles by new one similar to existing. All other nessessary works (Finishes and mechanical works) ***Rate or Lump Sum in Words:***	№			
1.2.4a New Item	Contractor Shall remove existing, newly added Water Heater . Works to include - Removal of all pipes and accessories - Replacement of damaged tiles by new one similar to existing. All other nessessary works (Finishes and mechanical works) ***Rate or Lump Sum in Words:***	№			
	GENERAL TECHNICAL REQUIREMENTS **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION**				
2.3	**Drain Cover** Supply and install floor drain cover (P.E) 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 Engineer instructions				
2.3.1	Cover for FCO ***Rate or Lump Sum in Words:***	№			
	SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**WATER PIPE WORK INSTALLATION**				
3.2	**Electrical Water Heater** Electrical water heater as specified and scheduled; include pipe work connections, temperature and pressure gauges, control and power wiring from the MCC, hot water and pipe work connections, control and high limit control valves, isolation and safety valves, thermal insulation, valve boxes, bonding and identification, and the heater should be of a good trade mark of European or west made or first class Lebanese product.				
3.2.2	EWH-02 (100 L) ***Rate or Lump Sum in Words:***	№			
	WATER PIPE WORK INSTALLATION TOTAL CARRIED TO COLLECTION				
4	**FIRE PROTECTION**				
	FIRE PROTECTION TOTAL CARRIED TO COLLECTION				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**SANITARY FIXTURES**				
5.2	**W.C. For Non Kids** 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 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)				
5.2.1	EWC-01 (Wall Hang - 52 x 36 cm) ***Rate or Lump Sum in Words:***	№			
5.2.3a New Item	EWC Accessories (Seat Cover - Flush Tank Cover / Push Button Etc…) ***Rate or Lump Sum in Words:***	№	7		
5.4	**Lavatories for Non Kids** Supply and install semi pedestal wash basin similar to Ideal Standard No. 742001 or approved equal 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) ***Rate or Lump Sum in Words:***	№			
5.4.2	LAV-02 (wall hang, handicapped with mixers 56 x 41 cm) ***Rate or Lump Sum in Words:***	№			
5.4.3a	LAV accessories (Traps - Mixers - Fixation, Etc…) ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5.5	**Urinal** Supply and installation of high quality urinal units complete with proper wall fixation with anti-dust materials including drainage & water supply connection as per the approved shop drawings. Cost to include all necessary accessories, valves, sensors to provide workable system.				
5.5.1	Urinal ***Rate or Lump Sum in Words:***	№			
5.6	**Self Close Taps on Kids & Students Lavatories** Supply and install self close taps to be fixed in the lavatory body as manufactured by Grohe Item No. 36-173 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 ***Rate or Lump Sum in Words:***	№			
5.7	**Wall Type Self Close Taps on Drinking Basins** Supply and install self close taps to be fixed in the drinking basin body as manufactured by Grohe Item No. 36-176 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 ***Rate or Lump Sum in Words:***	№	12		
5.8	**Kitchen Sink Accessories** Supply and install kitchen sink accessories such as chrome trap, angle valve, mixers as specified				
5.8.1	Kitchen Sink Accessories ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5.10	**Lavatories Resin Accessories** Supply and install lavatories resin accessories such as chrome trap, angle valves as specified				
5.10.1	Lavatories Resin Accessories ***Rate or Lump Sum in Words:***	№			
5.14	**Hose Bib** Supply and install Hose Bib taps including water connection & all necessary accessories as required				
5.14.1	HB - 01 ***Rate or Lump Sum in Words:***	№	4		
5.14.2a New Item	Maintenace of Potable Water System Contractor shall ensure proper functionality of the system ***Rate or Lump Sum in Words:***	Item	1		
5.14.3a New Item	Rehabilitation of existing septic tank, including cleaning, crack and joint sealing, waterproofing, replacement of damaged fittings, and all necessary works to restore watertightness and proper operation ***Rate or Lump Sum in Words:***	Item			
	SANITARY FIXTURES **TOTAL CARRIED TO COLLECTION**				

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Bill № 4: Electrical Engineering Services



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**BASIC ELECTRICAL REQUIREMENTS** 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	**Fixing and Repairing** 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 ***Rate or Lump Sum in Words:***	LS	1		
1.1.2	Wires and cables ***Rate or Lump Sum in Words:***	LS	1		
1.1.3	Sockets and switches ***Rate or Lump Sum in Words:***	LS	1		
1.1.4	Circuit breakers ***Rate or Lump Sum in Words:***	LS	1		
1.1.5	Disconnecting switches ***Rate or Lump Sum in Words:***	LS			
	BASIC ELECTRICAL REQUIREMENTS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**PANELBOARDS**				
2.2	**Computer Lab Panel Board (Rehabilitation)**				
2.2.1	Rehabilitate and install the Computer Lab Panel Board, works to include: - Rehabilitation and connection - Wires installation - Accessories - All Accessories Failed Complete to shop drawings and to the satisfaction of the engineer (ready to use) ***Rate or Lump Sum in Words:***	№			
2.3a New Item	Supply and Install New Panel Board Cover ***Rate or Lump Sum in Words:***	№			
	PANELBOARDS **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**GENERAL LIGHTING INSTALLATIONS**				
3.1	**Lighting Fixtures** 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 φ ≥ 0.9 ***Rate or Lump Sum in Words:***	№	8		
3.1.2	Replace existing lighting fixtures with C1 ***Rate or Lump Sum in Words:***	№			
3.1.3	TYPE C2: as same as TYPE C1 but Pendent mounted ***Rate or Lump Sum in Words:***	№			
3.1.4	TYPE A2 / A3: 600x600 mm LED Panel 3600lm, 33W, 4000K, 80CRI surface-mount/recessed, die-cast aluminum, IP20 ***Rate or Lump Sum in Words:***	№			
3.1.5	TYPE A1: as same as TYPE A2 but Pendent mounted ***Rate or Lump Sum in Words:***	№	7		
3.1.6	TYPE N4 / N3: LED - 900lm - 12.5W - 3000K - 80CRI - WW Surface mounted / Recessed Downlight Round - 120 deg ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3.1.7	TYPE F: PLAFONIERA OVAL Wall mounted - IP54 Aluminum die-cast housing IK 06 - CLASS I Lamp SHOULD BE LED 900Lm, 4000K, 17W. ***Rate or Lump Sum in Words:***	№			
3.1.8	TYPE W: A++ / COB LED 3000K 230V CRI 90 - 3955lm - 42W IP65 - IK07 - Die-cast EN AB-47100 aluminum housing with high corrosion resistance. ***Rate or Lump Sum in Words:***	№			
3.1.9	TYPE L (LED): OVAL 18W 516Lm IP54 IK06 FOR LIFT & TECHNICAL SHAFTS. Wall mounted luminaire Aluminum die cast housing in EN AB-47100 (low copper content) with high resistance against corrosion. IK 06 Sand blasted glass diffuser. Lamp fixed position. LOR 43% Isolation: CLASS I. Black (cod.09). Lamp not included. ***Rate or Lump Sum in Words:***	№			
3.1.10	Replace Existing lighting fixtures with TYPE L (LED) ***Rate or Lump Sum in Words:***	№			
3.1.11	TYPE M: LED - 1500lm - 17W - 4000K - 80CRI - Ceiling mounted - With Motion Sensor. ***Rate or Lump Sum in Words:***	№			
3.1.12	Replace Existing lighting fixtures with TYPE M ***Rate or Lump Sum in Words:***	№			
3.1.13	TYPE EM: Ceiling Emergency Ceiling mounted non-maintained 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65. ***Rate or Lump Sum in Words:***	№			



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3.1.14	Replace Existing EM with LED Emergency ***Rate or Lump Sum in Words:***	№			
3.1.15	TYPE EM: Wall Emergency Wall mounted non-maintained, 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65. ***Rate or Lump Sum in Words:***	№			
3.1.16	TYPE EX: Exit sign LED light wall/ceiling mounted maintained, 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65 with engraved letters on fixtures ***Rate or Lump Sum in Words:***	№			
3.1.17	Replace Existing Exit with LED Exits ***Rate or Lump Sum in Words:***	№			
3.1.18	TYPE H: High Bay LED Lightning fixture pendent 100W, 220V, 50Hz. ***Rate or Lump Sum in Words:***	№			
	GENERAL LIGHTING INSTALLATIONS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
4	**FIRE ALARM SYSTEM**				
	FIRE ALARM SYSTEM **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**DATA SYSTEM**				
	DATA SYSTEM **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
6	**UNINTERRUPTIBLE POWER SUPPLY (UPS)**				
	UNINTERRUPTIBLE POWER SUPPLY (UPS) TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
7	**CCTV SYSTEM** Supply, install, connect and test CCTV system complete with conduits installations from the location of the NVR through the different CCTV camera outlets, including the pull or draw boxes and derivation boxes, the junction and outlet boxes, 19" Rack, and all necessary connections to the management station as shown on drawings as per Tender Specifications and the like to the satisfaction of the supervision engineer.				
7.3a New Item	Replace existing Cameras by new one Similar to existing ***Rate or Lump Sum in Words:***	№			
	CCTV SYSTEM **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8	**SOLAR SYSTEM**				
8.1	Supply, install, connect and test the solar lighting system for all Electrical Loads (excluding Lifts, Pumps and AC Units) in perfect operating conditions, including but not limited to: - Photovoltaic multi-crystalline solar panels as shown on the drawings. - Hybrid Inverter - All cables, wires, conduits and all necessary accessories - Aluminum PV mountings - The Contractor shall ensure complete solar system which should function as the main Power Supply - The Contractor should submit detailed shop drawings and materials for approval. - For all blocks of the schools - Lithium Batteries for (Off-Grid Solar Types) - All necessary elevated structures on roof and other areas which are needed to install the required solar panel as mentioned on drawings (Sheds, Parking, etc.) areas ***Rate or Lump Sum in Words:***	LS			
8.1.2a	Replace Unfuctional Battery by new one similar to existing				
8.1.2.1a	Deye BOS-G 51.2 kWh High-Voltage $LiFePO_4$ Battery Energy Storage System – Complete Supply, Installation, Testing & Commissioning ***Rate or Lump Sum in Words:***	№			
8.1.2.1b	Deye BOS-GM5.1 HV $LiFePO_4$ Battery, 51.2 V, 100 Ah, 5.12 kWh, including installation, testing and commissioning ***Rate or Lump Sum in Words:***	№			
8.1.2.1c	Acid Battery, 12 V, 250 Ah ***Rate or Lump Sum in Words:***	№			
	SOLAR SYSTEM **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9	**BELL SYSTEM**				
	BELL SYSTEM **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10	**LIFTS REHABILITATION**				
10.1	Rehabilitation of the 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: 650kg Speed: 1.5mps Entrance size/ type: 1100 mm wide single speed center opening ***Rate or Lump Sum in Words:***	№			
	LIFTS REHABILITATION **TOTAL CARRIED TO COLLECTION**				

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General Summary
1008-Qaraoun Intermediate Public School



General Summary

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Bill № 2: Civil and Architectural Works



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**SITE PREPARATION AND DEMOLITION**				
1.1	**Demolishing and Removal of Debris**				
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. ***Rate or Lump Sum in Words:***	LS	1		
1.1a New Item	**Dismantling** The works include the dismantling works related to the newly installed water tanks and prefabricated units. - The contractor shall deliver the dismantled items to the Building administration / MEHE. ***Rate or Lump Sum in Words:***				
1.1.1.a New Item	Water Tanks ***Rate or Lump Sum in Words:***	№	2		
1.1.1.b New Item	Prefabricated Units ***Rate or Lump Sum in Words:***	№	1		
1.1.1.c New Item	Partitions of any type ***Rate or Lump Sum in Words:***	m2	85		
	SITE PREPARATION AND DEMOLITION **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**EXTERNAL WORKS**				
2.4 2.4.2	**School Fences with Related Gates** Rehabilitate Existing Fence (Strengthening & Rehabilitation) Work to include - Rehabilitate and support all the existing fence as per drawings - Determine the places that requires support - Preparation of shop drawings - Replace all broken elements - Redo all damaged elements and to be similar to existing elements - Finishing works as existing (plastering, paints, stone cladding, etc.) - Rehabilitate existing steel protection (Replace all damaged part by new similar to existing and paint with epoxy as specified) - Replace existing chain link by new one (Galvanized) - Reconstruct the broken and damaged parts and rehabilitate as it was with all similar materials including steel parts with related epoxy paint as per the engineer instructions ***Rate or Lump Sum in Words:***	m			
2.5 2.5.1	**Ramp for External Existing Sidewalk** 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 ***Rate or Lump Sum in Words:***	LS			
	EXTERNAL WORKS **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**CONCRETE** **Not Applicable**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
4	**MASONRY**				
	SITE PREPARATION AND DEMOLITION **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**METAL WORKS**				
5.1	**Provide New Steel Work (Door & Windows)**				
5.1.3	Provide new double glazed aluminum windows with new burglar proof protection ***Rate or Lump Sum in Words:***	№			
5.2	**Rehabilitate and Maintain the Existing Steel Work (Burglar Proof Protection + Opening)** 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 ***Rate or Lump Sum in Words:***	№			
5.2.7b New Item	Rehabilitate existing steel doors work to include all door accessories such as lock, handle and all necessary accessories. ***Rate or Lump Sum in Words:***	№	8		
5.5a New Item	**Steel Handrail** - Provide new metal handrail similar to exist with all all necessary accessories - Apply one layer of epoxy base paint - Apply putty - Apply epoxy paint as per specification All needed items as per the Engineer instructions				
5.5.1a New Item	Above Parapet ***Rate or Lump Sum in Words:***	m			
	METAL WORKS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
6	**WOOD AND PLASTICS**				
6.1	**Joinery Works**				
6.1.1	**Rehabilitate Existing Kitchen Cupboards** 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 ***Rate or Lump Sum in Words:***	m			
6.1.2	**Rehabilitate Timber Cupboard** Rehabilitate timber cupboards with plastic laminate color, work to include sub framing, drawer units, shelves, fixing and fastening hardware, heavy duty ironmongery, accessories, including finish, soft close, painting and all other related auxiliaries works as required by engineer - 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. - (No patching is allowed for existing wooden works) ***Rate or Lump Sum in Words:***	m^2			
	WOOD AND PLASTICS **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
7	**THERMAL AND MOISTURE PROTECTION**				
7.0	**Preliminaries**				
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 ***Rate or Lump Sum in Words:***	LS			
7.1 7.1.1	**Roof Waterproofing** 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 & debris - 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/m³ where required - Provide Geotextile layers - Provide all aluminum flashing with mastic - Provide finishing material as required - All as specified and approved shop drawings ***Rate or Lump Sum in Words:***	m²			
	THERMAL AND MOISTURE PROTECTION **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8	**DOOR AND WINDOWS**				
8.1	**Wooden Doors and Windows** 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	**Timber Doors** 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				
8.1.1.2	Provide new single leaf wooden door with view frame ***Rate or Lump Sum in Words:***	№			
8.1.1.5	Provide new toilet doors with related accessories as per specifications ***Rate or Lump Sum in Words:***	№			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.1.3	**Rehabilitate the Existing Timber Doors** 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.				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.1.3.1.1	Rehabilitate and paint existing single leaf timber doors with related accessories ***Rate or Lump Sum in Words:***	№	3		
8.1.3.1.5a New Item	Supply and install wooden doors accessories (Handle - Lock - Etc…) ***Rate or Lump Sum in Words:***	№			
8.1.3.1.6a New Item	Replace broken glass of the wooden door view access window ***Rate or Lump Sum in Words:***	№			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.2	**Aluminum Doors and Windows** 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	**New Aluminum Panels (Double Glass)** Supply and install the fabricated aluminum panels with double glass (6 - 12 - 6 mm) (Outer Glass should be Tempered)				
8.2.1.1	Provide new aluminum double glazed window & door panel ***Rate or Lump Sum in Words:***	№			
8.2.1.4	Replace existing elements by new single glazed aluminum windows (6mm) if the quantity of broken glass does not exceed 30% of whole building ***Rate or Lump Sum in Words:***	№			
8.2.2	**New Aluminum Internal Door** 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. ***Rate or Lump Sum in Words:***	№			
8.2.2.2	Provide new single glazed aluminum partition double leaf door ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
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 ***Rate or Lump Sum in Words:***	№			
8.2.3.1a New Item	Rehabilitate existing Doors ***Rate or Lump Sum in Words:***	№			
8.2.3.2a New Item	Rehabilitate existing aluminum Doors / Windows with all related accessories without Glass ***Rate or Lump Sum in Words:***	№	9		
	DOOR AND WINDOWS **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9	**FINISHES**				
9.1	**Cement Plaster** 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 9.1.1.1	**Internal and External Plaster Works** 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. ***Rate or Lump Sum in Words:***	m^2			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.1.2	**Repair of Existing Plaster (Internal - External) (Cracks, etc.)**				
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. Fill 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			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2	**Tiling Works (Similar to existing)** 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				
9.2.2 9.2.2.1	**New Glazed Colored Ceramic for Walls** Supply and install glazed colored ceramic for walls Include Ceramic Corner (first choice) ***Rate or Lump Sum in Words:***	m²			
9.2.4 9.2.4.1	**Repair existing broken floor tiles and skirting (all types) and reinstall by new, similar to existing for all rooms and corridors** 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. ***Rate or Lump Sum in Words:***	LS	1		

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2.4a New Item	**<u>Repair existing broken tiles (all types) and reinstall by new, similar to existing for toilets, drinking Basin and kitchen</u>**				
9.2.4.1a New Item	Rehabilitate and repair all damaged and broken tiles, 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. ***Rate or Lump Sum in Words:***	m²			
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				
9.2.7.2	Type 2: Ceramic ***Rate or Lump Sum in Words:***	m²			
9.2.7.3	Type 3: Mosaic ***Rate or Lump Sum in Words:***	m²			
9.2.7.5	Type 5: Skirting (any type and size) ***Rate or Lump Sum in Words:***	m	200		
9.2.7.8a New Item	Type 8: Terrazzo ***Rate or Lump Sum in Words:***	m²	100		
9.2.7.10a New Item	Type 10: Dismantling of the existing Faux parquet, Rehabilitate, Clean and Rub the Existing any type of flooring tiles and skirting ***Rate or Lump Sum in Words:***	m²			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2.8	**<u>Clean the Existing Decorative Wall Tiles</u>** Rehabilitate any type of decorative wall tiles (mosaic - marble - etc.) Work to include: - All materials and labors - Grouting - Polish and rubbing - All needed items as per the Engineer instruction. - Works to be executed by experts				
9.2.8.4	Type 4: Terrazzo ***Rate or Lump Sum in Words:***	m²			
9.2.9	**<u>Colored PVC for Covered Indoor KG Playgrounds</u>** Supply and install first class safe and antibacterial colored P.V.C. flooring for indoor KG playgrounds at least 6mm thick (Design shape and colors of vinyl flooring should be approved by engineer prior to installation) Work to include: - Shop drawing for design, shape and colors of vinyl flooring should be submitted for each classroom separately for engineer approval - Laminate existing finish flooring after removing vinyl by special concrete material level - Make good and smooth the flooring - Apply self leveling special materials(if needed) to assume Vinyl best finishing - Remove all the existing skirting - Treat the place of the existing skirting - Place the special glue as specified - Place the flooring and screw the skirting P.V.C. profile Labors and materials, screw, etc. All needed items as per the Engineer instructions and approval. <u>Note</u>: Work should be executed by experts and should be executed in presence and approval of supervision engineer and as per required specifications for materials and executions. ***Rate or Lump Sum in Words:***	m²			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.3	**Suspended Ceilings (Similar to existing)** 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 specifications - 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	**Metal Sheet Strips Suspended Ceilings:**				
9.3.1.2	60 x 60 cm Aluminum Suspended Ceiling ***Rate or Lump Sum in Words:***	m²			
9.4	**Gypsum Works (Similar to existing)**				
9.4.2	**Rehabilitate Existing Gypsum Suspended Ceiling (Tiles, Panels)**				
9.4.2.1	Rehabilitate existing gypsum board suspended ceiling n the case of damage or during construction. Works to include material, labor, equipment, etc. and to the engineer's approval ***Rate or Lump Sum in Words:***	m²			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.5	**Painting**				
9.5.1	**Wall and Ceilings Paint Works** 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, ***All paint types must be lead-free and Low VOC (Volatile Organic Compounds)***				
9.5.1.1	Super Rubber Paint for new walls and ceilings ***Rate or Lump Sum in Words:***	m²			
9.5.1.2	Super Rubber Paint for old walls and ceilings ***Rate or Lump Sum in Words:***	m²	500		
9.5.1.3	Oil Paint for new walls and ceilings ***Rate or Lump Sum in Words:***	m²			
9.5.1.4	Oil Paints for old walls and ceilings ***Rate or Lump Sum in Words:***	m²	1,000		

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.5.2 9.5.2.1	**<u>Outside Walls Paint (Old and New Walls and Ceilings)</u>** 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. ***Rate or Lump Sum in Words:***	m^2			
9.5.6	**<u>Epoxy coating (Playground -covered indoor Car Parking)</u>**				
9.5.6.5a New Item	For Roof ***Rate or Lump Sum in Words:***	m^2			
	FINISHES **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10	**SPECIALTIES**				
10.1	**Bathrooms Accessories** - 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				
10.1.1 10.1.1.1	**Paper Roller Holder** Supply and install paper holder no rust, no stain stainless steel 316 with all accessories and fixation (anti-rust materials) for good quality and at the places shown on drawings All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	№			
10.1.2 10.1.2.1	**Soap Dispenser** Supply and install stainless steel 316 no rust, no stain, soap dispenser wall type fixation (anti-rust materials and accessories) with all needed items All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	№			
10.1.3 10.1.3.1	**Paper Holder Box** Supply and install paper holder box from stainless steel 316 no rust, no stain, with all needed works and fixation (anti-rust materials and accessories) The box should be from a good manufacturer All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	№			
10.1.4	**Mirror for Lavatories** 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 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) ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10.1.5	**Handicapped Bathroom Accessories** - Remove and cart away old damaged fixtures Supply and install all needed bars for the handicapped toilet of stainless steel 316 Work to include: - Materials - Labors - and all needed items as per the Engineer instructions				
10.1.5.1	Supply and install vertical grab rail 60cm bars ***Rate or Lump Sum in Words:***	№			
10.1.5.2	Supply and install Horizontal grab rail 60cm bars ***Rate or Lump Sum in Words:***	№			
10.1.5.3	Supply and install Drop Down Rail removable arm 80cm ***Rate or Lump Sum in Words:***	№			
10.1.5.4	Alarm pull cord for emergency ***Rate or Lump Sum in Words:***	№			
10.1.5.5a New Item	Supply and install partition between urinals similar to existing with all needed fixation accessories ***Rate or Lump Sum in Words:***	№			
10.2	**Classroom Specialties**				
10.2.1 10.2.1.1	**White Teaching Boards** Supply and install White teaching boards from approved manufacturer as per specifications of Ministry of Education and Higher Education and corresponding to the site Cost to include: - (3600mm x 1200mm) final dimensions as per site limitation - Materials and labors - Felt marker pens and eraser (12 marker pens + 2 erases for each white board) - Stainless Steel screws - Remove the existing board - All needed works as per the Engineer instructions ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10.3	**Resin Work**				
10.3.1	**Drinking Basin** 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) ***Rate or Lump Sum in Words:***	№			
10.3.1.7a New Item	Rehabilitation of existing Drinking Basin - Any Length (Traps, Taps, Cleaning and repair of any damaged elements) ***Rate or Lump Sum in Words:***	№			
10.3.4	**Kitchen Counter** 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				
10.3.4.3	Kitchen Counter - Length (1.76 to 2.05 m) ***Rate or Lump Sum in Words:***	№			
10.5	**Internal Curtains** Supply and install internal rolling type tissue and polyester collapsible type curtain as per specifications and at the location as shown on drawings Works to include: - Materials - Labors - Heavy Duty Accessories - All needed works as per the Engineer instructions and approval				
10.5.1	On External Opening ***Rate or Lump Sum in Words:***	m^2			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
	SPECIALTIES **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
11	**EQUIPMENT**				
	EQUIPMENT **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
12	**FURNISHINGS**				
12.1	**INSTITUTIONAL FURNITURE** Supply and install the following institutional furniture complete including all necessary fixing and accessories, all as specified, shown on the drawings and to the satisfaction of the Engineer.				
12.1.1	**Classrooms Furniture**				
12.1.1.1	Standard desk with chair for classroom, single seat. ***Rate or Lump Sum in Words:***	№			
12.1.2	**Conference Room Furniture**				
12.1.2.1	Standard table. ***Rate or Lump Sum in Words:***	№			
12.1.2.2	Standard chairs. ***Rate or Lump Sum in Words:***	№			
12.1.6 12.1.6.1	**Hooks with Rails for Hats and Coats** Hooks with rails for hats and coats, rail size 120mm high x 20mm thick, softwood, treated and painted, countersunk screwed to wall & painted steel hooks every 200 mm (5№ hooks per linear meter of rail). ***Rate or Lump Sum in Words:***	lm			
	FURNISHINGS **TOTAL CARRIED TO COLLECTION**				

Collection

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2.1	SITE PREPARATION AND DEMOLITION	.....
2.2	EXTERNAL WORKS	.....
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2.5	METAL WORKS	.....
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Bill № 3: Mechanical Engineering Services



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**GENERAL TECHNICAL REQUIREMENTS**				
1.1	**General Mechanical Requirements**				
1.1.1	Revise all Mechanical drawings and make sure that they can be executed properly. ***Rate or Lump Sum in Words:***	Item			
1.2	**Rehabilitation Works General Requirements** 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, floor drains, roof drains, manholes, pumps, WC tanks, adding where applicable all necessary valves, flush valves, etc., and all other necessary works. ***Rate or Lump Sum in Words:***	Item	1		
1.2.2	Maintenance and rehabilitation of existing HVAC & fire fighting systems, including all necessary piping, duct works, pumps and controls, fans, mechanical works inside shafts, air conditioning units, etc. ***Rate or Lump Sum in Words:***	Item			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1.2.3a New Item	Contractor Shall remove existing, newly added showers. Works to include - Removal of fixtures (Shower head or hand) - Replacement of damaged tiles by new one similar to existing. All other nessessary works (Finishes and mechanical works) ***Rate or Lump Sum in Words:***	№			
1.2.4a New Item	Contractor Shall remove existing, newly added Water Heater . Works to include - Removal of all pipes and accessories - Replacement of damaged tiles by new one similar to existing. All other nessessary works (Finishes and mechanical works) ***Rate or Lump Sum in Words:***	№			
	GENERAL TECHNICAL REQUIREMENTS **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION**				
2.3	**Drain Cover** Supply and install floor drain cover (P.E) 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 Engineer instructions				
2.3.1	Cover for FCO ***Rate or Lump Sum in Words:***	№			
	SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**WATER PIPE WORK INSTALLATION**				
3.2	**Electrical Water Heater** Electrical water heater as specified and scheduled; include pipe work connections, temperature and pressure gauges, control and power wiring from the MCC, hot water and pipe work connections, control and high limit control valves, isolation and safety valves, thermal insulation, valve boxes, bonding and identification, and the heater should be of a good trade mark of European or west made or first class Lebanese product.				
3.2.2	EWH-02 (100 L) ***Rate or Lump Sum in Words:***	№			
	WATER PIPE WORK INSTALLATION **TOTAL CARRIED TO COLLECTION**				
4	**FIRE PROTECTION**				
	FIRE PROTECTION **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**SANITARY FIXTURES**				
5.2	**W.C. For Non Kids** 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 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)				
5.2.1	EWC-01 (Wall Hang - 52 x 36 cm) ***Rate or Lump Sum in Words:***	№			
5.2.3a New Item	EWC Accessories (Seat Cover - Flush Tank Cover / Push Button Etc…) ***Rate or Lump Sum in Words:***	№			
5.4	**Lavatories for Non Kids** Supply and install semi pedestal wash basin similar to Ideal Standard No. 742001 or approved equal 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) ***Rate or Lump Sum in Words:***	№			
5.4.2	LAV-02 (wall hang, handicapped with mixers 56 x 41 cm) ***Rate or Lump Sum in Words:***	№			
5.4.3a	LAV accessories (Traps - Mixers - Fixation, Etc…) ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5.5	**Urinal** Supply and installation of high quality urinal units complete with proper wall fixation with anti-dust materials including drainage & water supply connection as per the approved shop drawings. Cost to include all necessary accessories, valves, sensors to provide workable system.				
5.5.1	Urinal ***Rate or Lump Sum in Words:***	№			
5.6	**Self Close Taps on Kids & Students Lavatories** Supply and install self close taps to be fixed in the lavatory body as manufactured by Grohe Item No. 36-173 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 ***Rate or Lump Sum in Words:***	№			
5.7	**Wall Type Self Close Taps on Drinking Basins** Supply and install self close taps to be fixed in the drinking basin body as manufactured by Grohe Item No. 36-176 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 ***Rate or Lump Sum in Words:***	№	3		
5.8	**Kitchen Sink Accessories** Supply and install kitchen sink accessories such as chrome trap, angle valve, mixers as specified				
5.8.1	Kitchen Sink Accessories ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5.10	**Lavatories Resin Accessories** Supply and install lavatories resin accessories such as chrome trap, angle valves as specified				
5.10.1	Lavatories Resin Accessories ***Rate or Lump Sum in Words:***	№			
5.14	**Hose Bib** Supply and install Hose Bib taps including water connection & all necessary accessories as required				
5.14.1	HB - 01 ***Rate or Lump Sum in Words:***	№			
5.14.2a New Item	Maintenace of Potable Water System Contractor shall ensure proper functionality of the system ***Rate or Lump Sum in Words:***	Item			
5.14.3a New Item	Rehabilitation of existing septic tank, including cleaning, crack and joint sealing, waterproofing, replacement of damaged fittings, and all necessary works to restore watertightness and proper operation ***Rate or Lump Sum in Words:***	Item			
	SANITARY FIXTURES **TOTAL CARRIED TO COLLECTION**				

Collection

Page №		Amount (US $)
3.1	GENERAL TECHNICAL REQUIREMENTS	.....
3.2	SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION	.....
3.3	WATER PIPE WORK INSTALLATION	.....
3.4	FIRE PROTECTION	.....
3.5	SANITARY FIXTURES	.....
	Total Carried to General Summary	.....

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Bill № 4: Electrical Engineering Services



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**BASIC ELECTRICAL REQUIREMENTS** 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	**Fixing and Repairing** 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 ***Rate or Lump Sum in Words:***	LS	1		
1.1.2	Wires and cables ***Rate or Lump Sum in Words:***	LS			
1.1.3	Sockets and switches ***Rate or Lump Sum in Words:***	LS	1		
1.1.4	Circuit breakers ***Rate or Lump Sum in Words:***	LS			
1.1.5	Disconnecting switches ***Rate or Lump Sum in Words:***	LS			
	BASIC ELECTRICAL REQUIREMENTS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**PANELBOARDS**				
2.2	**Computer Lab Panel Board (Rehabilitation)**				
2.2.1	Rehabilitate and install the Computer Lab Panel Board, works to include: - Rehabilitation and connection - Wires installation - Accessories - All Accessories Failed Complete to shop drawings and to the satisfaction of the engineer (ready to use) ***Rate or Lump Sum in Words:***	№			
2.3a New Item	Supply and Install New Panel Board Cover ***Rate or Lump Sum in Words:***	№			
	PANELBOARDS **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**GENERAL LIGHTING INSTALLATIONS**				
3.1	**Lighting Fixtures** 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 φ ≥ 0.9 ***Rate or Lump Sum in Words:***	№			
3.1.2	Replace existing lighting fixtures with C1 ***Rate or Lump Sum in Words:***	№			
3.1.3	TYPE C2: as same as TYPE C1 but Pendent mounted ***Rate or Lump Sum in Words:***	№			
3.1.4	TYPE A2 / A3: 600x600 mm LED Panel 3600lm, 33W, 4000K, 80CRI surface-mount/recessed, die-cast aluminum, IP20 ***Rate or Lump Sum in Words:***	№			
3.1.5	TYPE A1: as same as TYPE A2 but Pendent mounted ***Rate or Lump Sum in Words:***	№			
3.1.6	TYPE N4 / N3: LED - 900lm - 12.5W - 3000K - 80CRI - WW Surface mounted / Recessed Downlight Round - 120 deg ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3.1.7	TYPE F: PLAFONIERA OVAL Wall mounted - IP54 Aluminum die-cast housing IK 06 - CLASS I Lamp SHOULD BE LED 900Lm, 4000K, 17W. ***Rate or Lump Sum in Words:***	№			
3.1.8	TYPE W: A++ / COB LED 3000K 230V CRI 90 - 3955lm - 42W IP65 - IK07 - Die-cast EN AB-47100 aluminum housing with high corrosion resistance. ***Rate or Lump Sum in Words:***	№			
3.1.9	TYPE L (LED): OVAL 18W 516Lm IP54 IK06 FOR LIFT & TECHNICAL SHAFTS. Wall mounted luminaire Aluminum die cast housing in EN AB-47100 (low copper content) with high resistance against corrosion. IK 06 Sand blasted glass diffuser. Lamp fixed position. LOR 43% Isolation: CLASS I. Black (cod.09). Lamp not included. ***Rate or Lump Sum in Words:***	№			
3.1.10	Replace Existing lighting fixtures with TYPE L (LED) ***Rate or Lump Sum in Words:***	№			
3.1.11	TYPE M: LED - 1500lm - 17W - 4000K - 80CRI - Ceiling mounted - With Motion Sensor. ***Rate or Lump Sum in Words:***	№			
3.1.12	Replace Existing lighting fixtures with TYPE M ***Rate or Lump Sum in Words:***	№			
3.1.13	TYPE EM: Ceiling Emergency Ceiling mounted non-maintained 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65. ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3.1.14	Replace Existing EM with LED Emergency ***Rate or Lump Sum in Words:***	№			
3.1.15	TYPE EM: Wall Emergency Wall mounted non-maintained, 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65. ***Rate or Lump Sum in Words:***	№			
3.1.16	TYPE EX: Exit sign LED light wall/ceiling mounted maintained, 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65 with engraved letters on fixtures ***Rate or Lump Sum in Words:***	№			
3.1.17	Replace Existing Exit with LED Exits ***Rate or Lump Sum in Words:***	№			
3.1.18	TYPE H: High Bay LED Lightning fixture pendent 100W, 220V, 50Hz. ***Rate or Lump Sum in Words:***	№			
	GENERAL LIGHTING INSTALLATIONS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
4	**FIRE ALARM SYSTEM**				
	FIRE ALARM SYSTEM TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**DATA SYSTEM**				
	DATA SYSTEM **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
6	**UNINTERRUPTIBLE POWER SUPPLY (UPS)**				
	UNINTERRUPTIBLE POWER SUPPLY (UPS) TOTAL CARRIED TO COLLECTION				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
7	**CCTV SYSTEM** Supply, install, connect and test CCTV system complete with conduits installations from the location of the NVR through the different CCTV camera outlets, including the pull or draw boxes and derivation boxes, the junction and outlet boxes, 19" Rack, and all necessary connections to the management station as shown on drawings as per Tender Specifications and the like to the satisfaction of the supervision engineer.				
7.3a New Item	Replace existing Cameras by new one Similar to existing ***Rate or Lump Sum in Words:***	№			
	CCTV SYSTEM **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8	**SOLAR SYSTEM**				
8.1	Supply, install, connect and test the solar lighting system for all Electrical Loads (excluding Lifts, Pumps and AC Units) in perfect operating conditions, including but not limited to: - Photovoltaic multi-crystalline solar panels as shown on the drawings. - Hybrid Inverter - All cables, wires, conduits and all necessary accessories - Aluminum PV mountings - The Contractor shall ensure complete solar system which should function as the main Power Supply - The Contractor should submit detailed shop drawings and materials for approval. - For all blocks of the schools - Lithium Batteries for (Off-Grid Solar Types) - All necessary elevated structures on roof and other areas which are needed to install the required solar panel as mentioned on drawings (Sheds, Parking, etc.) areas ***Rate or Lump Sum in Words:***	LS			
8.1.2a	Replace Unfuctional Battery by new one similar to existing				
8.1.2.1a	Deye BOS-G 51.2 kWh High-Voltage $LiFePO_4$ Battery Energy Storage System – Complete Supply, Installation, Testing & Commissioning ***Rate or Lump Sum in Words:***	№			
8.1.2.1b	Deye BOS-GM5.1 HV $LiFePO_4$ Battery, 51.2 V, 100 Ah, 5.12 kWh, including installation, testing and commissioning ***Rate or Lump Sum in Words:***	№			
8.1.2.1c	Acid Battery, 12 V, 250 Ah ***Rate or Lump Sum in Words:***	№			
	SOLAR SYSTEM **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9	**BELL SYSTEM**				
	BELL SYSTEM **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10	**LIFTS REHABILITATION**				
10.1	Rehabilitation of the 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: 650kg Speed: 1.5mps Entrance size/ type: 1100 mm wide single speed center opening ***Rate or Lump Sum in Words:***	№			
	LIFTS REHABILITATION **TOTAL CARRIED TO COLLECTION**				

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General Summary
1019-Rafeed Intermediate Public School



General Summary

Description	Amount (US $)
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Bill № 2: Civil and Architectural Works



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**SITE PREPARATION AND DEMOLITION**				
1.1	**Demolishing and Removal of Debris**				
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. ***Rate or Lump Sum in Words:***	LS	1		
1.1a New Item	**Dismantling** The works include the dismantling works related to the newly installed water tanks and prefabricated units. - The contractor shall deliver the dismantled items to the Building administration / MEHE. ***Rate or Lump Sum in Words:***				
1.1.1.a New Item	Water Tanks ***Rate or Lump Sum in Words:***	№	1		
1.1.1.b New Item	Prefabricated Units ***Rate or Lump Sum in Words:***	№	2		
1.1.1.c New Item	Partitions of any type ***Rate or Lump Sum in Words:***	m2			
	SITE PREPARATION AND DEMOLITION **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**EXTERNAL WORKS**				
2.4 2.4.2	**School Fences with Related Gates** Rehabilitate Existing Fence (Strengthening & Rehabilitation) Work to include - Rehabilitate and support all the existing fence as per drawings - Determine the places that requires support - Preparation of shop drawings - Replace all broken elements - Redo all damaged elements and to be similar to existing elements - Finishing works as existing (plastering, paints, stone cladding, etc.) - Rehabilitate existing steel protection (Replace all damaged part by new similar to existing and paint with epoxy as specified) - Replace existing chain link by new one (Galvanized) - Reconstruct the broken and damaged parts and rehabilitate as it was with all similar materials including steel parts with related epoxy paint as per the engineer instructions ***Rate or Lump Sum in Words:***	m			
2.5 2.5.1	**Ramp for External Existing Sidewalk** 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 ***Rate or Lump Sum in Words:***	LS			
	EXTERNAL WORKS **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**CONCRETE** **Not Applicable**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
4	**MASONRY**				
	SITE PREPARATION AND DEMOLITION **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**METAL WORKS**				
5.1	**Provide New Steel Work (Door & Windows)**				
5.1.3	Provide new double glazed aluminum windows with new burglar proof protection ***Rate or Lump Sum in Words:***	№			
5.2	**Rehabilitate and Maintain the Existing Steel Work (Burglar Proof Protection + Opening)** 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 ***Rate or Lump Sum in Words:***	№	3		
5.2.7b New Item	Rehabilitate existing steel doors work to include all door accessories such as lock, handle and all necessary accessories. ***Rate or Lump Sum in Words:***	№			
5.5a New Item	**Steel Handrail** - Provide new metal handrail similar to exist with all all necessary accessories - Apply one layer of epoxy base paint - Apply putty - Apply epoxy paint as per specification All needed items as per the Engineer instructions				
5.5.1a New Item	Above Parapet ***Rate or Lump Sum in Words:***	m			
	METAL WORKS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
6	**WOOD AND PLASTICS**				
6.1	**Joinery Works**				
6.1.1	**Rehabilitate Existing Kitchen Cupboards** 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 ***Rate or Lump Sum in Words:***	m			
6.1.2	**Rehabilitate Timber Cupboard** Rehabilitate timber cupboards with plastic laminate color, work to include sub framing, drawer units, shelves, fixing and fastening hardware, heavy duty ironmongery, accessories, including finish, soft close, painting and all other related auxiliaries works as required by engineer - 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. - (No patching is allowed for existing wooden works) ***Rate or Lump Sum in Words:***	m^2			
	WOOD AND PLASTICS **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
7	**THERMAL AND MOISTURE PROTECTION**				
7.0	**Preliminaries**				
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 ***Rate or Lump Sum in Words:***	LS			
7.1 7.1.1	**Roof Waterproofing** 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 & debris - 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/m³ where required - Provide Geotextile layers - Provide all aluminum flashing with mastic - Provide finishing material as required - All as specified and approved shop drawings ***Rate or Lump Sum in Words:***	m²			
	THERMAL AND MOISTURE PROTECTION **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8	**DOOR AND WINDOWS**				
8.1	**Wooden Doors and Windows** 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	**Timber Doors** 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				
8.1.1.2	Provide new single leaf wooden door with view frame ***Rate or Lump Sum in Words:***	№			
8.1.1.5	Provide new toilet doors with related accessories as per specifications ***Rate or Lump Sum in Words:***	№			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.1.3	**Rehabilitate the Existing Timber Doors** 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.				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.1.3.1.1	Rehabilitate and paint existing single leaf timber doors with related accessories ***Rate or Lump Sum in Words:***	№	18		
8.1.3.1.5a New Item	Supply and install wooden doors accessories (Handle - Lock - Etc…) ***Rate or Lump Sum in Words:***	№	2		
8.1.3.1.6a New Item	Replace broken glass of the wooden door view access window ***Rate or Lump Sum in Words:***	№			



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.2	**Aluminum Doors and Windows** 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	**New Aluminum Panels (Double Glass)** Supply and install the fabricated aluminum panels with double glass (6 - 12 - 6 mm) (Outer Glass should be Tempered)				
8.2.1.1	Provide new aluminum double glazed window & door panel ***Rate or Lump Sum in Words:***	№	2		
8.2.1.4	Replace existing elements by new single glazed aluminum windows (6mm) if the quantity of broken glass does not exceed 30% of whole building ***Rate or Lump Sum in Words:***	№			
8.2.2	**New Aluminum Internal Door** 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. ***Rate or Lump Sum in Words:***	№			
8.2.2.2	Provide new single glazed aluminum partition double leaf door ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
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 ***Rate or Lump Sum in Words:***	№			
8.2.3.1a New Item	Rehabilitate existing Doors ***Rate or Lump Sum in Words:***	№			
8.2.3.2a New Item	Rehabilitate existing aluminum Doors / Windows with all related accessories without Glass ***Rate or Lump Sum in Words:***	№			
	DOOR AND WINDOWS **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9	**FINISHES**				
9.1	**Cement Plaster** 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 9.1.1.1	**Internal and External Plaster Works** 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. ***Rate or Lump Sum in Words:***	m^2			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.1.2	**Repair of Existing Plaster (Internal - External) (Cracks, etc.)**				
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. Fill 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			



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2	**Tiling Works (Similar to existing)** 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				
9.2.2 9.2.2.1	**New Glazed Colored Ceramic for Walls** Supply and install glazed colored ceramic for walls Include Ceramic Corner (first choice) ***Rate or Lump Sum in Words:***	m²			
9.2.4 9.2.4.1	**Repair existing broken floor tiles and skirting (all types) and reinstall by new, similar to existing for all rooms and corridors** 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. ***Rate or Lump Sum in Words:***	LS	1		



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2.4a New Item	**<u>Repair existing broken tiles (all types) and reinstall by new, similar to existing for toilets, drinking Basin and kitchen</u>**				
9.2.4.1a New Item	Rehabilitate and repair all damaged and broken tiles, 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. ***Rate or Lump Sum in Words:***	m²			
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				
9.2.7.2	Type 2: Ceramic ***Rate or Lump Sum in Words:***	m²			
9.2.7.3	Type 3: Mosaic ***Rate or Lump Sum in Words:***	m²			
9.2.7.5	Type 5: Skirting (any type and size) ***Rate or Lump Sum in Words:***	m	200		
9.2.7.8a New Item	Type 8: Terrazzo ***Rate or Lump Sum in Words:***	m²	100		
9.2.7.10a New Item	Type 10: Dismantling of the existing Faux parquet, Rehabilitate, Clean and Rub the Existing any type of flooring tiles and skirting ***Rate or Lump Sum in Words:***	m²			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2.8	**Clean the Existing Decorative Wall Tiles** Rehabilitate any type of decorative wall tiles (mosaic - marble - etc.) Work to include: - All materials and labors - Grouting - Polish and rubbing - All needed items as per the Engineer instruction. - Works to be executed by experts				
9.2.8.4	Type 4: Terrazzo ***Rate or Lump Sum in Words:***	m²			
9.2.9	**Colored PVC for Covered Indoor KG Playgrounds** Supply and install first class safe and antibacterial colored P.V.C. flooring for indoor KG playgrounds at least 6mm thick (Design shape and colors of vinyl flooring should be approved by engineer prior to installation) Work to include: - Shop drawing for design, shape and colors of vinyl flooring should be submitted for each classroom separately for engineer approval - Laminate existing finish flooring after removing vinyl by special concrete material level - Make good and smooth the flooring - Apply self leveling special materials(if needed) to assume Vinyl best finishing - Remove all the existing skirting - Treat the place of the existing skirting - Place the special glue as specified - Place the flooring and screw the skirting P.V.C. profile Labors and materials, screw, etc. All needed items as per the Engineer instructions and approval. Note: Work should be executed by experts and should be executed in presence and approval of supervision engineer and as per required specifications for materials and executions. ***Rate or Lump Sum in Words:***	m²	35		

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.3	**Suspended Ceilings (Similar to existing)** 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 specifications - 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	**Metal Sheet Strips Suspended Ceilings:**				
9.3.1.2	60 x 60 cm Aluminum Suspended Ceiling ***Rate or Lump Sum in Words:***	m²			
9.4	**Gypsum Works (Similar to existing)**				
9.4.2	**Rehabilitate Existing Gypsum Suspended Ceiling (Tiles, Panels)**				
9.4.2.1	Rehabilitate existing gypsum board suspended ceiling n the case of damage or during construction. Works to include material, labor, equipment, etc. and to the engineer's approval ***Rate or Lump Sum in Words:***	m²			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.5	**Painting**				
9.5.1	**Wall and Ceilings Paint Works** 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, ***All paint types must be lead-free and Low VOC (Volatile Organic Compounds)***				
9.5.1.1	Super Rubber Paint for new walls and ceilings ***Rate or Lump Sum in Words:***	m²			
9.5.1.2	Super Rubber Paint for old walls and ceilings ***Rate or Lump Sum in Words:***	m²	300		
9.5.1.3	Oil Paint for new walls and ceilings ***Rate or Lump Sum in Words:***	m²			
9.5.1.4	Oil Paints for old walls and ceilings ***Rate or Lump Sum in Words:***	m²	250		

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
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. ***Rate or Lump Sum in Words:***	m²			
9.5.6	**<u>Epoxy coating (Playground -covered indoor Car Parking)</u>**				
9.5.6.5a New Item	For Roof ***Rate or Lump Sum in Words:***	m²			
	FINISHES **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10	**SPECIALTIES**				
10.1	**Bathrooms Accessories** - 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				
10.1.1 10.1.1.1	**Paper Roller Holder** Supply and install paper holder no rust, no stain stainless steel 316 with all accessories and fixation (anti-rust materials) for good quality and at the places shown on drawings All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	№ 			
10.1.2 10.1.2.1	**Soap Dispenser** Supply and install stainless steel 316 no rust, no stain, soap dispenser wall type fixation (anti-rust materials and accessories) with all needed items All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	 № 			
10.1.3 10.1.3.1	**Paper Holder Box** Supply and install paper holder box from stainless steel 316 no rust, no stain, with all needed works and fixation (anti-rust materials and accessories) The box should be from a good manufacturer All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	 № 			
10.1.4	**Mirror for Lavatories** 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 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) ***Rate or Lump Sum in Words:***	№ 	4		

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10.1.5	**<u>Handicapped Bathroom Accessories</u>** - Remove and cart away old damaged fixtures Supply and install all needed bars for the handicapped toilet of stainless steel 316 Work to include: - Materials - Labors - and all needed items as per the Engineer instructions				
10.1.5.1	Supply and install vertical grab rail 60cm bars ***Rate or Lump Sum in Words:***	№			
10.1.5.2	Supply and install Horizontal grab rail 60cm bars ***Rate or Lump Sum in Words:***	№			
10.1.5.3	Supply and install Drop Down Rail removable arm 80cm ***Rate or Lump Sum in Words:***	№			
10.1.5.4	Alarm pull cord for emergency ***Rate or Lump Sum in Words:***	№			
10.1.5.5a New Item	Supply and install partition between urinals similar to existing with all needed fixation accessories ***Rate or Lump Sum in Words:***	№			
10.2	**Classroom Specialties**				
10.2.1	**<u>White Teaching Boards</u>**				
10.2.1.1	Supply and install White teaching boards from approved manufacturer as per specifications of Ministry of Education and Higher Education and corresponding to the site Cost to include: - (3600mm x 1200mm) final dimensions as per site limitation - Materials and labors - Felt marker pens and eraser (12 marker pens + 2 erases for each white board) - Stainless Steel screws - Remove the existing board - All needed works as per the Engineer instructions ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10.3	**Resin Work**				
10.3.1	**Drinking Basin** 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) ***Rate or Lump Sum in Words:***	№			
10.3.1.7a New Item	Rehabilitation of existing Drinking Basin - Any Length (Traps, Taps, Cleaning and repair of any damaged elements) ***Rate or Lump Sum in Words:***	№			
10.3.4	**Kitchen Counter** 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				
10.3.4.3	Kitchen Counter - Length (1.76 to 2.05 m) ***Rate or Lump Sum in Words:***	№			
10.5	**Internal Curtains** Supply and install internal rolling type tissue and polyester collapsible type curtain as per specifications and at the location as shown on drawings Works to include: - Materials - Labors - Heavy Duty Accessories - All needed works as per the Engineer instructions and approval				
10.5.1	On External Opening ***Rate or Lump Sum in Words:***	m²			
	SPECIALITIES **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
11	**EQUIPMENT**				
	EQUIPMENT **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
12	**FURNISHINGS**				
12.1	**INSTITUTIONAL FURNITURE** Supply and install the following institutional furniture complete including all necessary fixing and accessories, all as specified, shown on the drawings and to the satisfaction of the Engineer.				
12.1.1	**Classrooms Furniture**				
12.1.1.1	Standard desk with chair for classroom, single seat. ***Rate or Lump Sum in Words:***	№			
12.1.2	**Conference Room Furniture**				
12.1.2.1	Standard table. ***Rate or Lump Sum in Words:***	№			
12.1.2.2	Standard chairs. ***Rate or Lump Sum in Words:***	№			
12.1.6 12.1.6.1	**Hooks with Rails for Hats and Coats** Hooks with rails for hats and coats, rail size 120mm high x 20mm thick, softwood, treated and painted, countersunk screwed to wall & painted steel hooks every 200 mm (5№ hooks per linear meter of rail). ***Rate or Lump Sum in Words:***	lm			
	FURNISHINGS **TOTAL CARRIED TO COLLECTION**				

Collection

Page №		Amount (US $)
2.1	SITE PREPARATION AND DEMOLITION	.....
2.2	EXTERNAL WORKS	.....
2.3	CONCRETE	.....
2.4	MASONRY	.....
2.5	METAL WORKS	.....
2.6	WOOD AND PLASTICS	.....
2.7	THERMAL AND MOISTURE PROTECTION	.....
2.8	DOOR AND WINDOWS	.....
2.9	FINISHES	.....
2.10	SPECIALTIES	.....
2.11	EQUIPMENT	.....
2.12	FURNISHINGS	.....
	Total Carried to General Summary	.....

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Bill № 3: Mechanical Engineering Services



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**GENERAL TECHNICAL REQUIREMENTS**				
1.1	**General Mechanical Requirements**				
1.1.1	Revise all Mechanical drawings and make sure that they can be executed properly. ***Rate or Lump Sum in Words:***	Item			
1.2	**Rehabilitation Works General Requirements** 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, floor drains, roof drains, manholes, pumps, WC tanks, adding where applicable all necessary valves, flush valves, etc., and all other necessary works. ***Rate or Lump Sum in Words:***	Item	1		
1.2.2	Maintenance and rehabilitation of existing HVAC & fire fighting systems, including all necessary piping, duct works, pumps and controls, fans, mechanical works inside shafts, air conditioning units, etc. ***Rate or Lump Sum in Words:***	Item			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1.2.3a New Item	Contractor Shall remove existing, newly added showers. Works to include - Removal of fixtures (Shower head or hand) - Replacement of damaged tiles by new one similar to existing. All other nessessary works (Finishes and mechanical works) ***Rate or Lump Sum in Words:***	№	5		
1.2.4a New Item	Contractor Shall remove existing, newly added Water Heater . Works to include - Removal of all pipes and accessories - Replacement of damaged tiles by new one similar to existing. All other nessessary works (Finishes and mechanical works) ***Rate or Lump Sum in Words:***	№	1		
	GENERAL TECHNICAL REQUIREMENTS **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION**				
2.3	**Drain Cover** Supply and install floor drain cover (P.E) 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 Engineer instructions				
2.3.1	Cover for FCO ***Rate or Lump Sum in Words:***	№			
	SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**WATER PIPE WORK INSTALLATION**				
3.2	**Electrical Water Heater** Electrical water heater as specified and scheduled; include pipe work connections, temperature and pressure gauges, control and power wiring from the MCC, hot water and pipe work connections, control and high limit control valves, isolation and safety valves, thermal insulation, valve boxes, bonding and identification, and the heater should be of a good trade mark of European or west made or first class Lebanese product.				
3.2.2	EWH-02 (100 L) ***Rate or Lump Sum in Words:***	№			
	WATER PIPE WORK INSTALLATION TOTAL CARRIED TO COLLECTION				
4	**FIRE PROTECTION**				
	FIRE PROTECTION TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**SANITARY FIXTURES**				
5.2	**W.C. For Non Kids** 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 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)				
5.2.1	EWC-01 (Wall Hang - 52 x 36 cm) ***Rate or Lump Sum in Words:***	№			
5.2.3a New Item	EWC Accessories (Seat Cover - Flush Tank Cover / Push Button Etc…) ***Rate or Lump Sum in Words:***	№	11		
5.4	**Lavatories for Non Kids** Supply and install semi pedestal wash basin similar to Ideal Standard No. 742001 or approved equal 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) ***Rate or Lump Sum in Words:***	№	6		
5.4.2	LAV-02 (wall hang, handicapped with mixers 56 x 41 cm) ***Rate or Lump Sum in Words:***	№			
5.4.3a	LAV accessories (Traps - Mixers - Fixation, Etc…) ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5.5	**Urinal** Supply and installation of high quality urinal units complete with proper wall fixation with anti-dust materials including drainage & water supply connection as per the approved shop drawings. Cost to include all necessary accessories, valves, sensors to provide workable system.				
5.5.1	Urinal ***Rate or Lump Sum in Words:***	№			
5.6	**Self Close Taps on Kids & Students Lavatories** Supply and install self close taps to be fixed in the lavatory body as manufactured by Grohe Item No. 36-173 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 ***Rate or Lump Sum in Words:***	№	5		
5.7	**Wall Type Self Close Taps on Drinking Basins** Supply and install self close taps to be fixed in the drinking basin body as manufactured by Grohe Item No. 36-176 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 ***Rate or Lump Sum in Words:***	№	9		
5.8	**Kitchen Sink Accessories** Supply and install kitchen sink accessories such as chrome trap, angle valve, mixers as specified				
5.8.1	Kitchen Sink Accessories ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5.10	**Lavatories Resin Accessories** Supply and install lavatories resin accessories such as chrome trap, angle valves as specified				
5.10.1	Lavatories Resin Accessories ***Rate or Lump Sum in Words:***	№			
5.14	**Hose Bib** Supply and install Hose Bib taps including water connection & all necessary accessories as required				
5.14.1	HB - 01 ***Rate or Lump Sum in Words:***	№			
5.14.2a New Item	Maintenace of Potable Water System Contractor shall ensure proper functionality of the system ***Rate or Lump Sum in Words:***	Item			
5.14.3a New Item	Rehabilitation of existing septic tank, including cleaning, crack and joint sealing, waterproofing, replacement of damaged fittings, and all necessary works to restore watertightness and proper operation ***Rate or Lump Sum in Words:***	Item			
	SANITARY FIXTURES **TOTAL CARRIED TO COLLECTION**				

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Bill № 4: Electrical Engineering Services



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**BASIC ELECTRICAL REQUIREMENTS** 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	**Fixing and Repairing** 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 ***Rate or Lump Sum in Words:***	LS	1		
1.1.2	Wires and cables ***Rate or Lump Sum in Words:***	LS			
1.1.3	Sockets and switches ***Rate or Lump Sum in Words:***	LS	1		
1.1.4	Circuit breakers ***Rate or Lump Sum in Words:***	LS			
1.1.5	Disconnecting switches ***Rate or Lump Sum in Words:***	LS			
	BASIC ELECTRICAL REQUIREMENTS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**PANELBOARDS**				
2.2	**Computer Lab Panel Board (Rehabilitation)**				
2.2.1	Rehabilitate and install the Computer Lab Panel Board, works to include: - Rehabilitation and connection - Wires installation - Accessories - All Accessories Failed Complete to shop drawings and to the satisfaction of the engineer (ready to use) ***Rate or Lump Sum in Words:***	№			
2.3a New Item	Supply and Install New Panel Board Cover ***Rate or Lump Sum in Words:***	№			
	PANELBOARDS **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**GENERAL LIGHTING INSTALLATIONS**				
3.1	**Lighting Fixtures** 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 φ ≥ 0.9 ***Rate or Lump Sum in Words:***	№			
3.1.2	Replace existing lighting fixtures with C1 ***Rate or Lump Sum in Words:***	№			
3.1.3	TYPE C2: as same as TYPE C1 but Pendent mounted ***Rate or Lump Sum in Words:***	№			
3.1.4	TYPE A2 / A3: 600x600 mm LED Panel 3600lm, 33W, 4000K, 80CRI surface-mount/recessed, die-cast aluminum, IP20 ***Rate or Lump Sum in Words:***	№			
3.1.5	TYPE A1: as same as TYPE A2 but Pendent mounted ***Rate or Lump Sum in Words:***	№			
3.1.6	TYPE N4 / N3: LED - 900lm - 12.5W - 3000K - 80CRI - WW Surface mounted / Recessed Downlight Round - 120 deg ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3.1.7	TYPE F: PLAFONIERA OVAL Wall mounted - IP54 Aluminum die-cast housing IK 06 - CLASS I Lamp SHOULD BE LED 900Lm, 4000K, 17W. ***Rate or Lump Sum in Words:***	№			
3.1.8	TYPE W: A++ / COB LED 3000K 230V CRI 90 - 3955lm - 42W IP65 - IK07 - Die-cast EN AB-47100 aluminum housing with high corrosion resistance. ***Rate or Lump Sum in Words:***	№			
3.1.9	TYPE L (LED): OVAL 18W 516Lm IP54 IK06 FOR LIFT & TECHNICAL SHAFTS. Wall mounted luminaire Aluminum die cast housing in EN AB-47100 (low copper content) with high resistance against corrosion. IK 06 Sand blasted glass diffuser. Lamp fixed position. LOR 43% Isolation: CLASS I. Black (cod.09). Lamp not included. ***Rate or Lump Sum in Words:***	№			
3.1.10	Replace Existing lighting fixtures with TYPE L (LED) ***Rate or Lump Sum in Words:***	№			
3.1.11	TYPE M: LED - 1500lm - 17W - 4000K - 80CRI - Ceiling mounted - With Motion Sensor. ***Rate or Lump Sum in Words:***	№			
3.1.12	Replace Existing lighting fixtures with TYPE M ***Rate or Lump Sum in Words:***	№			
3.1.13	TYPE EM: Ceiling Emergency Ceiling mounted non-maintained 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65. ***Rate or Lump Sum in Words:***	№			



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3.1.14	Replace Existing EM with LED Emergency ***Rate or Lump Sum in Words:***	№			
3.1.15	TYPE EM: Wall Emergency Wall mounted non-maintained, 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65. ***Rate or Lump Sum in Words:***	№			
3.1.16	TYPE EX: Exit sign LED light wall/ceiling mounted maintained, 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65 with engraved letters on fixtures ***Rate or Lump Sum in Words:***	№			
3.1.17	Replace Existing Exit with LED Exits ***Rate or Lump Sum in Words:***	№			
3.1.18	TYPE H: High Bay LED Lightning fixture pendent 100W, 220V, 50Hz. ***Rate or Lump Sum in Words:***	№			
	GENERAL LIGHTING INSTALLATIONS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
4	**FIRE ALARM SYSTEM**				
	FIRE ALARM SYSTEM TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**DATA SYSTEM**				
	DATA SYSTEM **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
6	**UNINTERRUPTIBLE POWER SUPPLY (UPS)**				
	UNINTERRUPTIBLE POWER SUPPLY (UPS) TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
7	**CCTV SYSTEM** Supply, install, connect and test CCTV system complete with conduits installations from the location of the NVR through the different CCTV camera outlets, including the pull or draw boxes and derivation boxes, the junction and outlet boxes, 19" Rack, and all necessary connections to the management station as shown on drawings as per Tender Specifications and the like to the satisfaction of the supervision engineer.				
7.3a New Item	Replace existing Cameras by new one Similar to existing ***Rate or Lump Sum in Words:***	№			
	CCTV SYSTEM **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8	**SOLAR SYSTEM**				
8.1	Supply, install, connect and test the solar lighting system for all Electrical Loads (excluding Lifts, Pumps and AC Units) in perfect operating conditions, including but not limited to: - Photovoltaic multi-crystalline solar panels as shown on the drawings. - Hybrid Inverter - All cables, wires, conduits and all necessary accessories - Aluminum PV mountings - The Contractor shall ensure complete solar system which should function as the main Power Supply - The Contractor should submit detailed shop drawings and materials for approval. - For all blocks of the schools - Lithium Batteries for (Off-Grid Solar Types) - All necessary elevated structures on roof and other areas which are needed to install the required solar panel as mentioned on drawings (Sheds, Parking, etc.) areas ***Rate or Lump Sum in Words:***	LS			
8.1.2a	Replace Unfuctional Battery by new one similar to existing				
8.1.2.1a	Deye BOS-G 51.2 kWh High-Voltage $LiFePO_4$ Battery Energy Storage System – Complete Supply, Installation, Testing & Commissioning ***Rate or Lump Sum in Words:***	№			
8.1.2.1b	Deye BOS-GM5.1 HV $LiFePO_4$ Battery, 51.2 V, 100 Ah, 5.12 kWh, including installation, testing and commissioning ***Rate or Lump Sum in Words:***	№			
8.1.2.1c	Acid Battery, 12 V, 250 Ah ***Rate or Lump Sum in Words:***	№			
	SOLAR SYSTEM **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9	**BELL SYSTEM**				
	BELL SYSTEM **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10	**LIFTS REHABILITATION**				
10.1	Rehabilitation of the 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: 650kg Speed: 1.5mps Entrance size/ type: 1100 mm wide single speed center opening ***Rate or Lump Sum in Words:***	№			
	LIFTS REHABILITATION **TOTAL CARRIED TO COLLECTION**				

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General Summary
1021-Biri Intermediate Public School



General Summary

Description	Amount (US $)
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* Total Amount of Tender (VAT Not Applicable) ……	

* Total Amount of Tender in Words:

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Bill № 2: Civil and Architectural Works



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**SITE PREPARATION AND DEMOLITION**				
1.1	**Demolishing and Removal of Debris**				
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. ***Rate or Lump Sum in Words:***	LS	1		
1.1a New Item	**Dismantling** The works include the dismantling works related to the newly installed water tanks and prefabricated units. - The contractor shall deliver the dismantled items to the Building administration / MEHE. ***Rate or Lump Sum in Words:***				
1.1.1.a New Item	Water Tanks ***Rate or Lump Sum in Words:***	№			
1.1.1.b New Item	Prefabricated Units ***Rate or Lump Sum in Words:***	№	2		
1.1.1.c New Item	Partitions of any type ***Rate or Lump Sum in Words:***	m2	45		
	SITE PREPARATION AND DEMOLITION **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**EXTERNAL WORKS**				
2.4 2.4.2	**School Fences with Related Gates** Rehabilitate Existing Fence (Strengthening & Rehabilitation) Work to include - Rehabilitate and support all the existing fence as per drawings - Determine the places that requires support - Preparation of shop drawings - Replace all broken elements - Redo all damaged elements and to be similar to existing elements - Finishing works as existing (plastering, paints, stone cladding, etc.) - Rehabilitate existing steel protection (Replace all damaged part by new similar to existing and paint with epoxy as specified) - Replace existing chain link by new one (Galvanized) - Reconstruct the broken and damaged parts and rehabilitate as it was with all similar materials including steel parts with related epoxy paint as per the engineer instructions ***Rate or Lump Sum in Words:***	m			
2.5 2.5.1	**Ramp for External Existing Sidewalk** 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 ***Rate or Lump Sum in Words:***	LS			
	EXTERNAL WORKS **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**CONCRETE** **Not Applicable**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
4	**MASONRY**				
	SITE PREPARATION AND DEMOLITION **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**METAL WORKS**				
5.1	**Provide New Steel Work (Door & Windows)**				
5.1.3	Provide new double glazed aluminum windows with new burglar proof protection ***Rate or Lump Sum in Words:***	№			
5.2	**Rehabilitate and Maintain the Existing Steel Work (Burglar Proof Protection + Opening)** 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 ***Rate or Lump Sum in Words:***	№			
5.2.7b New Item	Rehabilitate existing steel doors work to include all door accessories such as lock, handle and all necessary accessories. ***Rate or Lump Sum in Words:***	№			
5.5a New Item	**Steel Handrail** - Provide new metal handrail similar to exist with all all necessary accessories - Apply one layer of epoxy base paint - Apply putty - Apply epoxy paint as per specification All needed items as per the Engineer instructions				
5.5.1a New Item	Above Parapet ***Rate or Lump Sum in Words:***	m			
	METAL WORKS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
6	**WOOD AND PLASTICS**				
6.1	**Joinery Works**				
6.1.1	**Rehabilitate Existing Kitchen Cupboards** 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 ***Rate or Lump Sum in Words:***	m			
6.1.2	**Rehabilitate Timber Cupboard** Rehabilitate timber cupboards with plastic laminate color, work to include sub framing, drawer units, shelves, fixing and fastening hardware, heavy duty ironmongery, accessories, including finish, soft close, painting and all other related auxiliaries works as required by engineer - 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. - (No patching is allowed for existing wooden works) ***Rate or Lump Sum in Words:***	m^2			
	WOOD AND PLASTICS **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
7	**THERMAL AND MOISTURE PROTECTION**				
7.0	**Preliminaries**				
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 ***Rate or Lump Sum in Words:***	LS			
7.1 7.1.1	**Roof Waterproofing** 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 & debris - 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/m³ where required - Provide Geotextile layers - Provide all aluminum flashing with mastic - Provide finishing material as required - All as specified and approved shop drawings ***Rate or Lump Sum in Words:***	m²			
	THERMAL AND MOISTURE PROTECTION **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8	**DOOR AND WINDOWS**				
8.1	**Wooden Doors and Windows** 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	**Timber Doors** 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				
8.1.1.2	Provide new single leaf wooden door with view frame ***Rate or Lump Sum in Words:***	№			
8.1.1.5	Provide new toilet doors with related accessories as per specifications ***Rate or Lump Sum in Words:***	№	3		

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.1.3	**Rehabilitate the Existing Timber Doors** 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.				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.1.3.1.1	Rehabilitate and paint existing single leaf timber doors with related accessories ***Rate or Lump Sum in Words:***	№			
8.1.3.1.5a New Item	Supply and install wooden doors accessories (Handle - Lock - Etc…) ***Rate or Lump Sum in Words:***	№			
8.1.3.1.6a New Item	Replace broken glass of the wooden door view access window ***Rate or Lump Sum in Words:***	№			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.2	**Aluminum Doors and Windows** 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	**New Aluminum Panels (Double Glass)** Supply and install the fabricated aluminum panels with double glass (6 - 12 - 6 mm) (Outer Glass should be Tempered)				
8.2.1.1	Provide new aluminum double glazed window & door panel ***Rate or Lump Sum in Words:***	№			
8.2.1.4	Replace existing elements by new single glazed aluminum windows (6mm) if the quantity of broken glass does not exceed 30% of whole building ***Rate or Lump Sum in Words:***	№			
8.2.2	**New Aluminum Internal Door** 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. ***Rate or Lump Sum in Words:***	№			
8.2.2.2	Provide new single glazed aluminum partition double leaf door ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
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 ***Rate or Lump Sum in Words:***	№	62		
8.2.3.1a New Item	Rehabilitate existing Doors ***Rate or Lump Sum in Words:***	№			
8.2.3.2a New Item	Rehabilitate existing aluminum Doors / Windows with all related accessories without Glass ***Rate or Lump Sum in Words:***	№	11		
	DOOR AND WINDOWS **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9	**FINISHES**				
9.1	**Cement Plaster** 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 9.1.1.1	**Internal and External Plaster Works** 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. ***Rate or Lump Sum in Words:***	m^2			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.1.2	**Repair of Existing Plaster (Internal - External) (Cracks, etc.)**				
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. Fill 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			



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2	**Tiling Works (Similar to existing)** 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				
9.2.2 9.2.2.1	**New Glazed Colored Ceramic for Walls** Supply and install glazed colored ceramic for walls Include Ceramic Corner (first choice) ***Rate or Lump Sum in Words:***	m^2			
9.2.4 9.2.4.1	**Repair existing broken floor tiles and skirting (all types) and reinstall by new, similar to existing for all rooms and corridors** 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. ***Rate or Lump Sum in Words:***	LS			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2.4a New Item	**<u>Repair existing broken tiles (all types) and reinstall by new, similar to existing for toilets, drinking Basin and kitchen</u>**				
9.2.4.1a New Item	Rehabilitate and repair all damaged and broken tiles, 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. ***Rate or Lump Sum in Words:***	m²			
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				
9.2.7.2	Type 2: Ceramic ***Rate or Lump Sum in Words:***	m²			
9.2.7.3	Type 3: Mosaic ***Rate or Lump Sum in Words:***	m²			
9.2.7.5	Type 5: Skirting (any type and size) ***Rate or Lump Sum in Words:***	m	250		
9.2.7.8a New Item	Type 8: Terrazzo ***Rate or Lump Sum in Words:***	m²	500		
9.2.7.10a New Item	Type 10: Dismantling of the existing Faux parquet, Rehabilitate, Clean and Rub the Existing any type of flooring tiles and skirting ***Rate or Lump Sum in Words:***	m²			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2.8	**<u>Clean the Existing Decorative Wall Tiles</u>** Rehabilitate any type of decorative wall tiles (mosaic - marble - etc.) Work to include: - All materials and labors - Grouting - Polish and rubbing - All needed items as per the Engineer instruction. - Works to be executed by experts				
9.2.8.4	Type 4: Terrazzo ***Rate or Lump Sum in Words:***	m²			
9.2.9	**<u>Colored PVC for Covered Indoor KG Playgrounds</u>** Supply and install first class safe and antibacterial colored P.V.C. flooring for indoor KG playgrounds at least 6mm thick (Design shape and colors of vinyl flooring should be approved by engineer prior to installation) Work to include: - Shop drawing for design, shape and colors of vinyl flooring should be submitted for each classroom separately for engineer approval - Laminate existing finish flooring after removing vinyl by special concrete material level - Make good and smooth the flooring - Apply self leveling special materials(if needed) to assume Vinyl best finishing - Remove all the existing skirting - Treat the place of the existing skirting - Place the special glue as specified - Place the flooring and screw the skirting P.V.C. profile Labors and materials, screw, etc. All needed items as per the Engineer instructions and approval. <u>Note</u>: Work should be executed by experts and should be executed in presence and approval of supervision engineer and as per required specifications for materials and executions. ***Rate or Lump Sum in Words:***	m²			



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.3	**Suspended Ceilings (Similar to existing)** 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 specifications - 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	**Metal Sheet Strips Suspended Ceilings:**				
9.3.1.2	60 x 60 cm Aluminum Suspended Ceiling ***Rate or Lump Sum in Words:***	m^2			
9.4	**Gypsum Works (Similar to existing)**				
9.4.2	**Rehabilitate Existing Gypsum Suspended Ceiling (Tiles, Panels)**				
9.4.2.1	Rehabilitate existing gypsum board suspended ceiling n the case of damage or during construction. Works to include material, labor, equipment, etc. and to the engineer's approval ***Rate or Lump Sum in Words:***	m^2			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.5	**Painting**				
9.5.1	**Wall and Ceilings Paint Works** 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, ***All paint types must be lead-free and Low VOC (Volatile Organic Compounds)***				
9.5.1.1	Super Rubber Paint for new walls and ceilings ***Rate or Lump Sum in Words:***	m²			
9.5.1.2	Super Rubber Paint for old walls and ceilings ***Rate or Lump Sum in Words:***	m²	500		
9.5.1.3	Oil Paint for new walls and ceilings ***Rate or Lump Sum in Words:***	m²			
9.5.1.4	Oil Paints for old walls and ceilings ***Rate or Lump Sum in Words:***	m²	1,000		

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
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. ***Rate or Lump Sum in Words:***	m²			
9.5.6	**<u>Epoxy coating (Playground -covered indoor Car Parking)</u>**				
9.5.6.5a New Item	For Roof ***Rate or Lump Sum in Words:***	m²			
	FINISHES **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10	**SPECIALTIES**				
10.1	**Bathrooms Accessories** - 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				
10.1.1 10.1.1.1	**Paper Roller Holder** Supply and install paper holder no rust, no stain stainless steel 316 with all accessories and fixation (anti-rust materials) for good quality and at the places shown on drawings All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	№			
10.1.2 10.1.2.1	**Soap Dispenser** Supply and install stainless steel 316 no rust, no stain, soap dispenser wall type fixation (anti-rust materials and accessories) with all needed items All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	№			
10.1.3 10.1.3.1	**Paper Holder Box** Supply and install paper holder box from stainless steel 316 no rust, no stain, with all needed works and fixation (anti-rust materials and accessories) The box should be from a good manufacturer All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	№			
10.1.4	**Mirror for Lavatories** 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 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) ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10.1.5	**<u>Handicapped Bathroom Accessories</u>** - Remove and cart away old damaged fixtures Supply and install all needed bars for the handicapped toilet of stainless steel 316 Work to include: - Materials - Labors - and all needed items as per the Engineer instructions				
10.1.5.1	Supply and install vertical grab rail 60cm bars ***Rate or Lump Sum in Words:***	№			
10.1.5.2	Supply and install Horizontal grab rail 60cm bars ***Rate or Lump Sum in Words:***	№			
10.1.5.3	Supply and install Drop Down Rail removable arm 80cm ***Rate or Lump Sum in Words:***	№			
10.1.5.4	Alarm pull cord for emergency ***Rate or Lump Sum in Words:***	№			
10.1.5.5a New Item	Supply and install partition between urinals similar to existing with all needed fixation accessories ***Rate or Lump Sum in Words:***	№			
10.2	**Classroom Specialties**				
10.2.1 10.2.1.1	**<u>White Teaching Boards</u>** Supply and install White teaching boards from approved manufacturer as per specifications of Ministry of Education and Higher Education and corresponding to the site Cost to include: - (3600mm x 1200mm) final dimensions as per site limitation - Materials and labors - Felt marker pens and eraser (12 marker pens + 2 erases for each white board) - Stainless Steel screws - Remove the existing board - All needed works as per the Engineer instructions ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10.3	**Resin Work**				
10.3.1	**Drinking Basin** 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) ***Rate or Lump Sum in Words:***	№			
10.3.1.7a New Item	Rehabilitation of existing Drinking Basin - Any Length (Traps, Taps, Cleaning and repair of any damaged elements) ***Rate or Lump Sum in Words:***	№			
10.3.4	**Kitchen Counter** 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				
10.3.4.3	Kitchen Counter - Length (1.76 to 2.05 m) ***Rate or Lump Sum in Words:***	№			
10.5	**Internal Curtains** Supply and install internal rolling type tissue and polyester collapsible type curtain as per specifications and at the location as shown on drawings Works to include: - Materials - Labors - Heavy Duty Accessories - All needed works as per the Engineer instructions and approval				
10.5.1	On External Opening ***Rate or Lump Sum in Words:***	m²	20		
	SPECIALTIES **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
11	**EQUIPMENT**				
	EQUIPMENT **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
12	**FURNISHINGS**				
12.1	**INSTITUTIONAL FURNITURE** Supply and install the following institutional furniture complete including all necessary fixing and accessories, all as specified, shown on the drawings and to the satisfaction of the Engineer.				
12.1.1	**Classrooms Furniture**				
12.1.1.1	Standard desk with chair for classroom, single seat. ***Rate or Lump Sum in Words:***	№			
12.1.2	**Conference Room Furniture**				
12.1.2.1	Standard table. ***Rate or Lump Sum in Words:***	№			
12.1.2.2	Standard chairs. ***Rate or Lump Sum in Words:***	№			
12.1.6 12.1.6.1	**Hooks with Rails for Hats and Coats** Hooks with rails for hats and coats, rail size 120mm high x 20mm thick, softwood, treated and painted, countersunk screwed to wall & painted steel hooks every 200 mm (5№ hooks per linear meter of rail). ***Rate or Lump Sum in Words:***	lm			
	FURNISHINGS **TOTAL CARRIED TO COLLECTION**				

Collection

Page №		Amount (US $)
2.1	SITE PREPARATION AND DEMOLITION	.....
2.2	EXTERNAL WORKS	.....
2.3	CONCRETE	.....
2.4	MASONRY	.....
2.5	METAL WORKS	.....
2.6	WOOD AND PLASTICS	.....
2.7	THERMAL AND MOISTURE PROTECTION	.....
2.8	DOOR AND WINDOWS	.....
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2.10	SPECIALTIES	.....
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Bill № 3: Mechanical Engineering Services



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**GENERAL TECHNICAL REQUIREMENTS**				
1.1	**General Mechanical Requirements**				
1.1.1	Revise all Mechanical drawings and make sure that they can be executed properly. ***Rate or Lump Sum in Words:***	Item			
1.2	**Rehabilitation Works General Requirements** 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, floor drains, roof drains, manholes, pumps, WC tanks, adding where applicable all necessary valves, flush valves, etc., and all other necessary works. ***Rate or Lump Sum in Words:***	Item	1		
1.2.2	Maintenance and rehabilitation of existing HVAC & fire fighting systems, including all necessary piping, duct works, pumps and controls, fans, mechanical works inside shafts, air conditioning units, etc. ***Rate or Lump Sum in Words:***	Item			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1.2.3a New Item	Contractor Shall remove existing, newly added showers. Works to include - Removal of fixtures (Shower head or hand) - Replacement of damaged tiles by new one similar to existing. All other nessessary works (Finishes and mechanical works) ***Rate or Lump Sum in Words:***	№			
1.2.4a New Item	Contractor Shall remove existing, newly added Water Heater . Works to include - Removal of all pipes and accessories - Replacement of damaged tiles by new one similar to existing. All other nessessary works (Finishes and mechanical works) ***Rate or Lump Sum in Words:***	№	1		
	GENERAL TECHNICAL REQUIREMENTS **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION**				
2.3	**Drain Cover** Supply and install floor drain cover (P.E) 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 Engineer instructions				
2.3.1	Cover for FCO ***Rate or Lump Sum in Words:***	№			
	SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**WATER PIPE WORK INSTALLATION**				
3.2	**Electrical Water Heater** Electrical water heater as specified and scheduled; include pipe work connections, temperature and pressure gauges, control and power wiring from the MCC, hot water and pipe work connections, control and high limit control valves, isolation and safety valves, thermal insulation, valve boxes, bonding and identification, and the heater should be of a good trade mark of European or west made or first class Lebanese product.				
3.2.2	EWH-02 (100 L) ***Rate or Lump Sum in Words:***	№			
	WATER PIPE WORK INSTALLATION TOTAL CARRIED TO COLLECTION				
4	**FIRE PROTECTION**				
	FIRE PROTECTION TOTAL CARRIED TO COLLECTION				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**SANITARY FIXTURES**				
5.2	**W.C. For Non Kids** 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 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)				
5.2.1	EWC-01 (Wall Hang - 52 x 36 cm) ***Rate or Lump Sum in Words:***	№			
5.2.3a New Item	EWC Accessories (Seat Cover - Flush Tank Cover / Push Button Etc…) ***Rate or Lump Sum in Words:***	№			
5.4	**Lavatories for Non Kids** Supply and install semi pedestal wash basin similar to Ideal Standard No. 742001 or approved equal 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) ***Rate or Lump Sum in Words:***	№			
5.4.2	LAV-02 (wall hang, handicapped with mixers 56 x 41 cm) ***Rate or Lump Sum in Words:***	№			
5.4.3a	LAV accessories (Traps - Mixers - Fixation, Etc…) ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5.5	**Urinal** Supply and installation of high quality urinal units complete with proper wall fixation with anti-dust materials including drainage & water supply connection as per the approved shop drawings. Cost to include all necessary accessories, valves, sensors to provide workable system.				
5.5.1	Urinal ***Rate or Lump Sum in Words:***	№			
5.6	**Self Close Taps on Kids & Students Lavatories** Supply and install self close taps to be fixed in the lavatory body as manufactured by Grohe Item No. 36-173 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 ***Rate or Lump Sum in Words:***	№			
5.7	**Wall Type Self Close Taps on Drinking Basins** Supply and install self close taps to be fixed in the drinking basin body as manufactured by Grohe Item No. 36-176 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 ***Rate or Lump Sum in Words:***	№	10		
5.8	**Kitchen Sink Accessories** Supply and install kitchen sink accessories such as chrome trap, angle valve, mixers as specified				
5.8.1	Kitchen Sink Accessories ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5.10	**Lavatories Resin Accessories** Supply and install lavatories resin accessories such as chrome trap, angle valves as specified				
5.10.1	Lavatories Resin Accessories ***Rate or Lump Sum in Words:***	№			
5.14	**Hose Bib** Supply and install Hose Bib taps including water connection & all necessary accessories as required				
5.14.1	HB - 01 ***Rate or Lump Sum in Words:***	№			
5.14.2a New Item	Maintenace of Potable Water System Contractor shall ensure proper functionality of the system ***Rate or Lump Sum in Words:***	Item			
5.14.3a New Item	Rehabilitation of existing septic tank, including cleaning, crack and joint sealing, waterproofing, replacement of damaged fittings, and all necessary works to restore watertightness and proper operation ***Rate or Lump Sum in Words:***	Item			
	SANITARY FIXTURES **TOTAL CARRIED TO COLLECTION**				

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Page №		Amount (US $)
3.1	GENERAL TECHNICAL REQUIREMENTS	.....
3.2	SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION	.....
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3.4	FIRE PROTECTION	.....
3.5	SANITARY FIXTURES	.....
	Total Carried to General Summary	.....

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Bill № 4: Electrical Engineering Services



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**BASIC ELECTRICAL REQUIREMENTS** 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	**Fixing and Repairing** 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 ***Rate or Lump Sum in Words:***	LS	1		
1.1.2	Wires and cables ***Rate or Lump Sum in Words:***	LS			
1.1.3	Sockets and switches ***Rate or Lump Sum in Words:***	LS	1		
1.1.4	Circuit breakers ***Rate or Lump Sum in Words:***	LS			
1.1.5	Disconnecting switches ***Rate or Lump Sum in Words:***	LS			
	BASIC ELECTRICAL REQUIREMENTS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**PANELBOARDS**				
2.2	**Computer Lab Panel Board (Rehabilitation)**				
2.2.1	Rehabilitate and install the Computer Lab Panel Board, works to include: - Rehabilitation and connection - Wires installation - Accessories - All Accessories Failed Complete to shop drawings and to the satisfaction of the engineer (ready to use) ***Rate or Lump Sum in Words:***	№			
2.3a New Item	Supply and Install New Panel Board Cover ***Rate or Lump Sum in Words:***	№			
	PANELBOARDS **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**GENERAL LIGHTING INSTALLATIONS**				
3.1	**Lighting Fixtures** 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 φ ≥ 0.9 ***Rate or Lump Sum in Words:***	№			
3.1.2	Replace existing lighting fixtures with C1 ***Rate or Lump Sum in Words:***	№			
3.1.3	TYPE C2: as same as TYPE C1 but Pendent mounted ***Rate or Lump Sum in Words:***	№			
3.1.4	TYPE A2 / A3: 600x600 mm LED Panel 3600lm, 33W, 4000K, 80CRI surface-mount/recessed, die-cast aluminum, IP20 ***Rate or Lump Sum in Words:***	№			
3.1.5	TYPE A1: as same as TYPE A2 but Pendent mounted ***Rate or Lump Sum in Words:***	№			
3.1.6	TYPE N4 / N3: LED - 900lm - 12.5W - 3000K - 80CRI - WW Surface mounted / Recessed Downlight Round - 120 deg ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3.1.7	TYPE F: PLAFONIERA OVAL Wall mounted - IP54 Aluminum die-cast housing IK 06 - CLASS I Lamp SHOULD BE LED 900Lm, 4000K, 17W. ***Rate or Lump Sum in Words:***	№			
3.1.8	TYPE W: A++ / COB LED 3000K 230V CRI 90 - 3955lm - 42W IP65 - IK07 - Die-cast EN AB-47100 aluminum housing with high corrosion resistance. ***Rate or Lump Sum in Words:***	№			
3.1.9	TYPE L (LED): OVAL 18W 516Lm IP54 IK06 FOR LIFT & TECHNICAL SHAFTS. Wall mounted luminaire Aluminum die cast housing in EN AB-47100 (low copper content) with high resistance against corrosion. IK 06 Sand blasted glass diffuser. Lamp fixed position. LOR 43% Isolation: CLASS I. Black (cod.09). Lamp not included. ***Rate or Lump Sum in Words:***	№			
3.1.10	Replace Existing lighting fixtures with TYPE L (LED) ***Rate or Lump Sum in Words:***	№			
3.1.11	TYPE M: LED - 1500lm - 17W - 4000K - 80CRI - Ceiling mounted - With Motion Sensor. ***Rate or Lump Sum in Words:***	№			
3.1.12	Replace Existing lighting fixtures with TYPE M ***Rate or Lump Sum in Words:***	№			
3.1.13	TYPE EM: Ceiling Emergency Ceiling mounted non-maintained 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65. ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3.1.14	Replace Existing EM with LED Emergency ***Rate or Lump Sum in Words:***	№			
3.1.15	TYPE EM: Wall Emergency Wall mounted non-maintained, 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65. ***Rate or Lump Sum in Words:***	№			
3.1.16	TYPE EX: Exit sign LED light wall/ceiling mounted maintained, 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65 with engraved letters on fixtures ***Rate or Lump Sum in Words:***	№			
3.1.17	Replace Existing Exit with LED Exits ***Rate or Lump Sum in Words:***	№			
3.1.18	TYPE H: High Bay LED Lightning fixture pendent 100W, 220V, 50Hz. ***Rate or Lump Sum in Words:***	№			
	GENERAL LIGHTING INSTALLATIONS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
4	**FIRE ALARM SYSTEM**				
	FIRE ALARM SYSTEM **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**DATA SYSTEM**				
	DATA SYSTEM **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
6	**UNINTERRUPTIBLE POWER SUPPLY (UPS)**				
	UNINTERRUPTIBLE POWER SUPPLY (UPS) TOTAL CARRIED TO COLLECTION				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
7	**CCTV SYSTEM** Supply, install, connect and test CCTV system complete with conduits installations from the location of the NVR through the different CCTV camera outlets, including the pull or draw boxes and derivation boxes, the junction and outlet boxes, 19" Rack, and all necessary connections to the management station as shown on drawings as per Tender Specifications and the like to the satisfaction of the supervision engineer.				
7.3a New Item	Replace existing Cameras by new one Similar to existing ***Rate or Lump Sum in Words:***	№			
	CCTV SYSTEM **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8	**SOLAR SYSTEM**				
8.1	Supply, install, connect and test the solar lighting system for all Electrical Loads (excluding Lifts, Pumps and AC Units) in perfect operating conditions, including but not limited to: - Photovoltaic multi-crystalline solar panels as shown on the drawings. - Hybrid Inverter - All cables, wires, conduits and all necessary accessories - Aluminum PV mountings - The Contractor shall ensure complete solar system which should function as the main Power Supply - The Contractor should submit detailed shop drawings and materials for approval. - For all blocks of the schools - Lithium Batteries for (Off-Grid Solar Types) - All necessary elevated structures on roof and other areas which are needed to install the required solar panel as mentioned on drawings (Sheds, Parking, etc.) areas ***Rate or Lump Sum in Words:***	LS			
8.1.2a	Replace Unfuctional Battery by new one similar to existing				
8.1.2.1a	Deye BOS-G 51.2 kWh High-Voltage $LiFePO_4$ Battery Energy Storage System – Complete Supply, Installation, Testing & Commissioning ***Rate or Lump Sum in Words:***	№			
8.1.2.1b	Deye BOS-GM5.1 HV $LiFePO_4$ Battery, 51.2 V, 100 Ah, 5.12 kWh, including installation, testing and commissioning ***Rate or Lump Sum in Words:***	№			
8.1.2.1c	Acid Battery, 12 V, 250 Ah ***Rate or Lump Sum in Words:***	№			
	SOLAR SYSTEM **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9	**BELL SYSTEM**				
	BELL SYSTEM **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10	**LIFTS REHABILITATION**				
10.1	Rehabilitation of the 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: 650kg Speed: 1.5mps Entrance size/ type: 1100 mm wide single speed center opening ***Rate or Lump Sum in Words:***	№			
	LIFTS REHABILITATION **TOTAL CARRIED TO COLLECTION**				

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Collection

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General Summary
1022-Mazraat Ezzeh Public School



General Summary

Description	Amount (US $)
Bill № 2: Civil and Architectural Works ……	
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Bill № 4: 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:

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Bill № 2: Civil and Architectural Works

Bill № 3: Mechanical Engineering Services

Bill № 4: Electrical Engineering Services

General Summary

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Bill № 2: Civil and Architectural Works



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**SITE PREPARATION AND DEMOLITION**				
1.1	**Demolishing and Removal of Debris**				
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. ***Rate or Lump Sum in Words:***	LS	1		
1.1a New Item	**Dismantling** The works include the dismantling works related to the newly installed water tanks and prefabricated units. - The contractor shall deliver the dismantled items to the Building administration / MEHE. ***Rate or Lump Sum in Words:***				
1.1.1.a New Item	Water Tanks ***Rate or Lump Sum in Words:***	№	2		
1.1.1.b New Item	Prefabricated Units ***Rate or Lump Sum in Words:***	№	2		
1.1.1.c New Item	Partitions of any type ***Rate or Lump Sum in Words:***	m2			
	SITE PREPARATION AND DEMOLITION **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**EXTERNAL WORKS**				
2.4 2.4.2	**School Fences with Related Gates** Rehabilitate Existing Fence (Strengthening & Rehabilitation) Work to include - Rehabilitate and support all the existing fence as per drawings - Determine the places that requires support - Preparation of shop drawings - Replace all broken elements - Redo all damaged elements and to be similar to existing elements - Finishing works as existing (plastering, paints, stone cladding, etc.) - Rehabilitate existing steel protection (Replace all damaged part by new similar to existing and paint with epoxy as specified) - Replace existing chain link by new one (Galvanized) - Reconstruct the broken and damaged parts and rehabilitate as it was with all similar materials including steel parts with related epoxy paint as per the engineer instructions ***Rate or Lump Sum in Words:***	m			
2.5 2.5.1	**Ramp for External Existing Sidewalk** 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 ***Rate or Lump Sum in Words:***	LS			
	EXTERNAL WORKS **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**CONCRETE** **Not Applicable**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
4	**MASONRY**				
	SITE PREPARATION AND DEMOLITION TOTAL CARRIED TO COLLECTION				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**METAL WORKS**				
5.1	**Provide New Steel Work (Door & Windows)**				
5.1.3	Provide new double glazed aluminum windows with new burglar proof protection ***Rate or Lump Sum in Words:***	№			
5.2	**Rehabilitate and Maintain the Existing Steel Work (Burglar Proof Protection + Opening)** 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 ***Rate or Lump Sum in Words:***	№			
5.2.7b New Item	Rehabilitate existing steel doors work to include all door accessories such as lock, handle and all necessary accessories. ***Rate or Lump Sum in Words:***	№			
5.5a New Item	**Steel Handrail** - Provide new metal handrail similar to exist with all all necessary accessories - Apply one layer of epoxy base paint - Apply putty - Apply epoxy paint as per specification All needed items as per the Engineer instructions				
5.5.1a New Item	Above Parapet ***Rate or Lump Sum in Words:***	m			
	METAL WORKS **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
6	**WOOD AND PLASTICS**				
6.1	**Joinery Works**				
6.1.1	**Rehabilitate Existing Kitchen Cupboards** 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 ***Rate or Lump Sum in Words:***	m			
6.1.2	**Rehabilitate Timber Cupboard** Rehabilitate timber cupboards with plastic laminate color, work to include sub framing, drawer units, shelves, fixing and fastening hardware, heavy duty ironmongery, accessories, including finish, soft close, painting and all other related auxiliaries works as required by engineer - 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. - (No patching is allowed for existing wooden works) ***Rate or Lump Sum in Words:***	m^2			
	WOOD AND PLASTICS **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
7	**THERMAL AND MOISTURE PROTECTION**				
7.0	**Preliminaries**				
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 ***Rate or Lump Sum in Words:***	LS			
7.1 7.1.1	**Roof Waterproofing** 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 & debris - 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/m³ where required - Provide Geotextile layers - Provide all aluminum flashing with mastic - Provide finishing material as required - All as specified and approved shop drawings ***Rate or Lump Sum in Words:***	m²			
	THERMAL AND MOISTURE PROTECTION **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8	**DOOR AND WINDOWS**				
8.1	**Wooden Doors and Windows** 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	**Timber Doors** 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				
8.1.1.2	Provide new single leaf wooden door with view frame ***Rate or Lump Sum in Words:***	№			
8.1.1.5	Provide new toilet doors with related accessories as per specifications ***Rate or Lump Sum in Words:***	№			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.1.3	**Rehabilitate the Existing Timber Doors** 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.				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.1.3.1.1	Rehabilitate and paint existing single leaf timber doors with related accessories ***Rate or Lump Sum in Words:***	№			
8.1.3.1.5a New Item	Supply and install wooden doors accessories (Handle - Lock - Etc…) ***Rate or Lump Sum in Words:***	№	4		
8.1.3.1.6a New Item	Replace broken glass of the wooden door view access window ***Rate or Lump Sum in Words:***	№			



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
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)				
8.2.1.1	Provide new aluminum double glazed window & door panel ***Rate or Lump Sum in Words:***	№			
8.2.1.4	Replace existing elements by new single glazed aluminum windows (6mm) if the quantity of broken glass does not exceed 30% of whole building ***Rate or Lump Sum in Words:***	№			
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. ***Rate or Lump Sum in Words:***	№			
8.2.2.2	Provide new single glazed aluminum partition double leaf door ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
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 ***Rate or Lump Sum in Words:***	№			
8.2.3.1a New Item	Rehabilitate existing Doors ***Rate or Lump Sum in Words:***	№			
8.2.3.2a New Item	Rehabilitate existing aluminum Doors / Windows with all related accessories without Glass ***Rate or Lump Sum in Words:***	№	10		
	DOOR AND WINDOWS **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9	**FINISHES**				
9.1	**Cement Plaster** 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 9.1.1.1	**Internal and External Plaster Works** 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. ***Rate or Lump Sum in Words:***	m^2			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.1.2	**Repair of Existing Plaster (Internal - External) (Cracks, etc.)**				
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. Fill 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			



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2	**Tiling Works (Similar to existing)** 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				
9.2.2 9.2.2.1	**New Glazed Colored Ceramic for Walls** Supply and install glazed colored ceramic for walls Include Ceramic Corner (first choice) ***Rate or Lump Sum in Words:***	m^2			
9.2.4 9.2.4.1	**Repair existing broken floor tiles and skirting (all types) and reinstall by new, similar to existing for all rooms and corridors** 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. ***Rate or Lump Sum in Words:***	LS			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2.4a New Item	**<u>Repair existing broken tiles (all types) and reinstall by new, similar to existing for toilets, drinking Basin and kitchen</u>**				
9.2.4.1a New Item	Rehabilitate and repair all damaged and broken tiles, 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. ***Rate or Lump Sum in Words:***	m^2			
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				
9.2.7.2	Type 2: Ceramic ***Rate or Lump Sum in Words:***	m^2			
9.2.7.3	Type 3: Mosaic ***Rate or Lump Sum in Words:***	m^2			
9.2.7.5	Type 5: Skirting (any type and size) ***Rate or Lump Sum in Words:***	m	500		
9.2.7.8a New Item	Type 8: Terrazzo ***Rate or Lump Sum in Words:***	m^2	260		
9.2.7.10a New Item	Type 10: Dismantling of the existing Faux parquet, Rehabilitate, Clean and Rub the Existing any type of flooring tiles and skirting ***Rate or Lump Sum in Words:***	m^2			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2.8	**Clean the Existing Decorative Wall Tiles** Rehabilitate any type of decorative wall tiles (mosaic - marble - etc.) Work to include: - All materials and labors - Grouting - Polish and rubbing - All needed items as per the Engineer instruction. - Works to be executed by experts				
9.2.8.4	Type 4: Terrazzo ***Rate or Lump Sum in Words:***	m²			
9.2.9	**Colored PVC for Covered Indoor KG Playgrounds** Supply and install first class safe and antibacterial colored P.V.C. flooring for indoor KG playgrounds at least 6mm thick (Design shape and colors of vinyl flooring should be approved by engineer prior to installation) Work to include: - Shop drawing for design, shape and colors of vinyl flooring should be submitted for each classroom separately for engineer approval - Laminate existing finish flooring after removing vinyl by special concrete material level - Make good and smooth the flooring - Apply self leveling special materials(if needed) to assume Vinyl best finishing - Remove all the existing skirting - Treat the place of the existing skirting - Place the special glue as specified - Place the flooring and screw the skirting P.V.C. profile Labors and materials, screw, etc. All needed items as per the Engineer instructions and approval. Note: Work should be executed by experts and should be executed in presence and approval of supervision engineer and as per required specifications for materials and executions. ***Rate or Lump Sum in Words:***	m²			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.3	**Suspended Ceilings (Similar to existing)** 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 specifications - 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	**Metal Sheet Strips Suspended Ceilings:**				
9.3.1.2	60 x 60 cm Aluminum Suspended Ceiling ***Rate or Lump Sum in Words:***	m^2			
9.4	**Gypsum Works (Similar to existing)**				
9.4.2	**Rehabilitate Existing Gypsum Suspended Ceiling (Tiles, Panels)**				
9.4.2.1	Rehabilitate existing gypsum board suspended ceiling n the case of damage or during construction. Works to include material, labor, equipment, etc. and to the engineer's approval ***Rate or Lump Sum in Words:***	m^2			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.5	**Painting**				
9.5.1	**Wall and Ceilings Paint Works** 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, ***All paint types must be lead-free and Low VOC (Volatile Organic Compounds)***				
9.5.1.1	Super Rubber Paint for new walls and ceilings ***Rate or Lump Sum in Words:***	m²			
9.5.1.2	Super Rubber Paint for old walls and ceilings ***Rate or Lump Sum in Words:***	m²	600		
9.5.1.3	Oil Paint for new walls and ceilings ***Rate or Lump Sum in Words:***	m²			
9.5.1.4	Oil Paints for old walls and ceilings ***Rate or Lump Sum in Words:***	m²	1,000		

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.5.2 9.5.2.1	**<u>Outside Walls Paint (Old and New Walls and Ceilings)</u>** 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. ***Rate or Lump Sum in Words:***	m^2			
9.5.6	**<u>Epoxy coating (Playground -covered indoor Car Parking)</u>**				
9.5.6.5a New Item	For Roof ***Rate or Lump Sum in Words:***	m^2			
	FINISHES **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10	**SPECIALTIES**				
10.1	**Bathrooms Accessories** - 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				
10.1.1 10.1.1.1	**Paper Roller Holder** Supply and install paper holder no rust, no stain stainless steel 316 with all accessories and fixation (anti-rust materials) for good quality and at the places shown on drawings All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	№ 			
10.1.2 10.1.2.1	**Soap Dispenser** Supply and install stainless steel 316 no rust, no stain, soap dispenser wall type fixation (anti-rust materials and accessories) with all needed items All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	 № 			
10.1.3 10.1.3.1	**Paper Holder Box** Supply and install paper holder box from stainless steel 316 no rust, no stain, with all needed works and fixation (anti-rust materials and accessories) The box should be from a good manufacturer All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	 № 			
10.1.4	**Mirror for Lavatories** 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 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) ***Rate or Lump Sum in Words:***	№ 			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10.1.5	**<u>Handicapped Bathroom Accessories</u>** - Remove and cart away old damaged fixtures Supply and install all needed bars for the handicapped toilet of stainless steel 316 Work to include: - Materials - Labors - and all needed items as per the Engineer instructions				
10.1.5.1	Supply and install vertical grab rail 60cm bars ***Rate or Lump Sum in Words:***	№			
10.1.5.2	Supply and install Horizontal grab rail 60cm bars ***Rate or Lump Sum in Words:***	№			
10.1.5.3	Supply and install Drop Down Rail removable arm 80cm ***Rate or Lump Sum in Words:***	№			
10.1.5.4	Alarm pull cord for emergency ***Rate or Lump Sum in Words:***	№			
10.1.5.5a New Item	Supply and install partition between urinals similar to existing with all needed fixation accessories ***Rate or Lump Sum in Words:***	№			
10.2	**Classroom Specialties**				
10.2.1 10.2.1.1	**<u>White Teaching Boards</u>** Supply and install White teaching boards from approved manufacturer as per specifications of Ministry of Education and Higher Education and corresponding to the site Cost to include: - (3600mm x 1200mm) final dimensions as per site limitation - Materials and labors - Felt marker pens and eraser (12 marker pens + 2 erases for each white board) - Stainless Steel screws - Remove the existing board - All needed works as per the Engineer instructions ***Rate or Lump Sum in Words:***	№			



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10.3	**Resin Work**				
10.3.1	**Drinking Basin** 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) ***Rate or Lump Sum in Words:***	№			
10.3.1.7a New Item	Rehabilitation of existing Drinking Basin - Any Length (Traps, Taps, Cleaning and repair of any damaged elements) ***Rate or Lump Sum in Words:***	№			
10.3.4	**Kitchen Counter** 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				
10.3.4.3	Kitchen Counter - Length (1.76 to 2.05 m) ***Rate or Lump Sum in Words:***	№			
10.5	**Internal Curtains** Supply and install internal rolling type tissue and polyester collapsible type curtain as per specifications and at the location as shown on drawings Works to include: - Materials - Labors - Heavy Duty Accessories - All needed works as per the Engineer instructions and approval				
10.5.1	On External Opening ***Rate or Lump Sum in Words:***	m²	60		
	SPECIALTIES **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
11	**EQUIPMENT**				
	EQUIPMENT **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
12	**FURNISHINGS**				
12.1	**INSTITUTIONAL FURNITURE** Supply and install the following institutional furniture complete including all necessary fixing and accessories, all as specified, shown on the drawings and to the satisfaction of the Engineer.				
12.1.1	**Classrooms Furniture**				
12.1.1.1	Standard desk with chair for classroom, single seat. ***Rate or Lump Sum in Words:***	№			
12.1.2	**Conference Room Furniture**				
12.1.2.1	Standard table. ***Rate or Lump Sum in Words:***	№			
12.1.2.2	Standard chairs. ***Rate or Lump Sum in Words:***	№			
12.1.6 12.1.6.1	**Hooks with Rails for Hats and Coats** Hooks with rails for hats and coats, rail size 120mm high x 20mm thick, softwood, treated and painted, countersunk screwed to wall & painted steel hooks every 200 mm (5№ hooks per linear meter of rail). ***Rate or Lump Sum in Words:***	lm			
	FURNISHINGS **TOTAL CARRIED TO COLLECTION**				

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Bill № 3: Mechanical Engineering Services



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**GENERAL TECHNICAL REQUIREMENTS**				
1.1	**General Mechanical Requirements**				
1.1.1	Revise all Mechanical drawings and make sure that they can be executed properly. ***Rate or Lump Sum in Words:***	Item			
1.2	**Rehabilitation Works General Requirements** 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, floor drains, roof drains, manholes, pumps, WC tanks, adding where applicable all necessary valves, flush valves, etc., and all other necessary works. ***Rate or Lump Sum in Words:***	Item	1		
1.2.2	Maintenance and rehabilitation of existing HVAC & fire fighting systems, including all necessary piping, duct works, pumps and controls, fans, mechanical works inside shafts, air conditioning units, etc. ***Rate or Lump Sum in Words:***	Item			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1.2.3a New Item	Contractor Shall remove existing, newly added showers. Works to include - Removal of fixtures (Shower head or hand) - Replacement of damaged tiles by new one similar to existing. All other nessessary works (Finishes and mechanical works) ***Rate or Lump Sum in Words:***	№			
1.2.4a New Item	Contractor Shall remove existing, newly added Water Heater . Works to include - Removal of all pipes and accessories - Replacement of damaged tiles by new one similar to existing. All other nessessary works (Finishes and mechanical works) ***Rate or Lump Sum in Words:***	№			
	GENERAL TECHNICAL REQUIREMENTS **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION**				
2.3	**Drain Cover** Supply and install floor drain cover (P.E) 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 Engineer instructions				
2.3.1	Cover for FCO ***Rate or Lump Sum in Words:***	№			
	SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**WATER PIPE WORK INSTALLATION**				
3.2	**Electrical Water Heater** Electrical water heater as specified and scheduled; include pipe work connections, temperature and pressure gauges, control and power wiring from the MCC, hot water and pipe work connections, control and high limit control valves, isolation and safety valves, thermal insulation, valve boxes, bonding and identification, and the heater should be of a good trade mark of European or west made or first class Lebanese product.				
3.2.2	EWH-02 (100 L) ***Rate or Lump Sum in Words:***	№			
	WATER PIPE WORK INSTALLATION TOTAL CARRIED TO COLLECTION				
4	**FIRE PROTECTION**				
	FIRE PROTECTION TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**SANITARY FIXTURES**				
5.2	**W.C. For Non Kids** 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 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)				
5.2.1	EWC-01 (Wall Hang - 52 x 36 cm) ***Rate or Lump Sum in Words:***	№			
5.2.3a New Item	EWC Accessories (Seat Cover - Flush Tank Cover / Push Button Etc…) ***Rate or Lump Sum in Words:***	№			
5.4	**Lavatories for Non Kids** Supply and install semi pedestal wash basin similar to Ideal Standard No. 742001 or approved equal 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) ***Rate or Lump Sum in Words:***	№			
5.4.2	LAV-02 (wall hang, handicapped with mixers 56 x 41 cm) ***Rate or Lump Sum in Words:***	№			
5.4.3a	LAV accessories (Traps - Mixers - Fixation, Etc…) ***Rate or Lump Sum in Words:***	№			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5.5	**Urinal** Supply and installation of high quality urinal units complete with proper wall fixation with anti-dust materials including drainage & water supply connection as per the approved shop drawings. Cost to include all necessary accessories, valves, sensors to provide workable system.				
5.5.1	Urinal ***Rate or Lump Sum in Words:***	№			
5.6	**Self Close Taps on Kids & Students Lavatories** Supply and install self close taps to be fixed in the lavatory body as manufactured by Grohe Item No. 36-173 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 ***Rate or Lump Sum in Words:***	№			
5.7	**Wall Type Self Close Taps on Drinking Basins** Supply and install self close taps to be fixed in the drinking basin body as manufactured by Grohe Item No. 36-176 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 ***Rate or Lump Sum in Words:***	№			
5.8	**Kitchen Sink Accessories** Supply and install kitchen sink accessories such as chrome trap, angle valve, mixers as specified				
5.8.1	Kitchen Sink Accessories ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5.10	**Lavatories Resin Accessories** Supply and install lavatories resin accessories such as chrome trap, angle valves as specified				
5.10.1	Lavatories Resin Accessories ***Rate or Lump Sum in Words:***	№			
5.14	**Hose Bib** Supply and install Hose Bib taps including water connection & all necessary accessories as required				
5.14.1	HB - 01 ***Rate or Lump Sum in Words:***	№			
5.14.2a New Item	Maintenace of Potable Water System Contractor shall ensure proper functionality of the system ***Rate or Lump Sum in Words:***	Item			
5.14.3a New Item	Rehabilitation of existing septic tank, including cleaning, crack and joint sealing, waterproofing, replacement of damaged fittings, and all necessary works to restore watertightness and proper operation ***Rate or Lump Sum in Words:***	Item			
	SANITARY FIXTURES **TOTAL CARRIED TO COLLECTION**				

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3.5	SANITARY FIXTURES	.....
	Total Carried to General Summary	.....

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Bill № 4: Electrical Engineering Services



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**BASIC ELECTRICAL REQUIREMENTS** 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	**Fixing and Repairing** 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 ***Rate or Lump Sum in Words:***	LS	1		
1.1.2	Wires and cables ***Rate or Lump Sum in Words:***	LS			
1.1.3	Sockets and switches ***Rate or Lump Sum in Words:***	LS	1		
1.1.4	Circuit breakers ***Rate or Lump Sum in Words:***	LS			
1.1.5	Disconnecting switches ***Rate or Lump Sum in Words:***	LS			
	BASIC ELECTRICAL REQUIREMENTS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**PANELBOARDS**				
2.2	**Computer Lab Panel Board (Rehabilitation)**				
2.2.1	Rehabilitate and install the Computer Lab Panel Board, works to include: - Rehabilitation and connection - Wires installation - Accessories - All Accessories Failed Complete to shop drawings and to the satisfaction of the engineer (ready to use) ***Rate or Lump Sum in Words:***	№			
2.3a New Item	Supply and Install New Panel Board Cover ***Rate or Lump Sum in Words:***	№			
	PANELBOARDS **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**GENERAL LIGHTING INSTALLATIONS**				
3.1	**Lighting Fixtures** 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 φ ≥ 0.9 ***Rate or Lump Sum in Words:***	№			
3.1.2	Replace existing lighting fixtures with C1 ***Rate or Lump Sum in Words:***	№	32		
3.1.3	TYPE C2: as same as TYPE C1 but Pendent mounted ***Rate or Lump Sum in Words:***	№			
3.1.4	TYPE A2 / A3: 600x600 mm LED Panel 3600lm, 33W, 4000K, 80CRI surface-mount/recessed, die-cast aluminum, IP20 ***Rate or Lump Sum in Words:***	№			
3.1.5	TYPE A1: as same as TYPE A2 but Pendent mounted ***Rate or Lump Sum in Words:***	№			
3.1.6	TYPE N4 / N3: LED - 900lm - 12.5W - 3000K - 80CRI - WW Surface mounted / Recessed Downlight Round - 120 deg ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3.1.7	TYPE F: PLAFONIERA OVAL Wall mounted - IP54 Aluminum die-cast housing IK 06 - CLASS I Lamp SHOULD BE LED 900Lm, 4000K, 17W. ***Rate or Lump Sum in Words:***	№			
3.1.8	TYPE W: A++ / COB LED 3000K 230V CRI 90 - 3955lm - 42W IP65 - IK07 - Die-cast EN AB-47100 aluminum housing with high corrosion resistance. ***Rate or Lump Sum in Words:***	№			
3.1.9	TYPE L (LED): OVAL 18W 516Lm IP54 IK06 FOR LIFT & TECHNICAL SHAFTS. Wall mounted luminaire Aluminum die cast housing in EN AB-47100 (low copper content) with high resistance against corrosion. IK 06 Sand blasted glass diffuser. Lamp fixed position. LOR 43% Isolation: CLASS I. Black (cod.09). Lamp not included. ***Rate or Lump Sum in Words:***	№			
3.1.10	Replace Existing lighting fixtures with TYPE L (LED) ***Rate or Lump Sum in Words:***	№			
3.1.11	TYPE M: LED - 1500lm - 17W - 4000K - 80CRI - Ceiling mounted - With Motion Sensor. ***Rate or Lump Sum in Words:***	№			
3.1.12	Replace Existing lighting fixtures with TYPE M ***Rate or Lump Sum in Words:***	№			
3.1.13	TYPE EM: Ceiling Emergency Ceiling mounted non-maintained 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65. ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3.1.14	Replace Existing EM with LED Emergency ***Rate or Lump Sum in Words:***	№			
3.1.15	TYPE EM: Wall Emergency Wall mounted non-maintained, 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65. ***Rate or Lump Sum in Words:***	№			
3.1.16	TYPE EX: Exit sign LED light wall/ceiling mounted maintained, 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65 with engraved letters on fixtures ***Rate or Lump Sum in Words:***	№			
3.1.17	Replace Existing Exit with LED Exits ***Rate or Lump Sum in Words:***	№			
3.1.18	TYPE H: High Bay LED Lightning fixture pendent 100W, 220V, 50Hz. ***Rate or Lump Sum in Words:***	№			
	GENERAL LIGHTING INSTALLATIONS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
4	**FIRE ALARM SYSTEM**				
	FIRE ALARM SYSTEM **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**DATA SYSTEM**				
	DATA SYSTEM **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
6	**UNINTERRUPTIBLE POWER SUPPLY (UPS)**				
	UNINTERRUPTIBLE POWER SUPPLY (UPS) TOTAL CARRIED TO COLLECTION				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
7	**CCTV SYSTEM** Supply, install, connect and test CCTV system complete with conduits installations from the location of the NVR through the different CCTV camera outlets, including the pull or draw boxes and derivation boxes, the junction and outlet boxes, 19" Rack, and all necessary connections to the management station as shown on drawings as per Tender Specifications and the like to the satisfaction of the supervision engineer.				
7.3a New Item	Replace existing Cameras by new one Similar to existing ***Rate or Lump Sum in Words:***	№			
	CCTV SYSTEM **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8	**SOLAR SYSTEM**				
8.1	Supply, install, connect and test the solar lighting system for all Electrical Loads (excluding Lifts, Pumps and AC Units) in perfect operating conditions, including but not limited to: - Photovoltaic multi-crystalline solar panels as shown on the drawings. - Hybrid Inverter - All cables, wires, conduits and all necessary accessories - Aluminum PV mountings - The Contractor shall ensure complete solar system which should function as the main Power Supply - The Contractor should submit detailed shop drawings and materials for approval. - For all blocks of the schools - Lithium Batteries for (Off-Grid Solar Types) - All necessary elevated structures on roof and other areas which are needed to install the required solar panel as mentioned on drawings (Sheds, Parking, etc.) areas ***Rate or Lump Sum in Words:***	LS			
8.1.2a	Replace Unfuctional Battery by new one similar to existing				
8.1.2.1a	Deye BOS-G 51.2 kWh High-Voltage $LiFePO_4$ Battery Energy Storage System – Complete Supply, Installation, Testing & Commissioning ***Rate or Lump Sum in Words:***	№			
8.1.2.1b	Deye BOS-GM5.1 HV $LiFePO_4$ Battery, 51.2 V, 100 Ah, 5.12 kWh, including installation, testing and commissioning ***Rate or Lump Sum in Words:***	№			
8.1.2.1c	Acid Battery, 12 V, 250 Ah ***Rate or Lump Sum in Words:***	№			
	SOLAR SYSTEM **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9	**BELL SYSTEM**				
	BELL SYSTEM **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10	**LIFTS REHABILITATION**				
10.1	Rehabilitation of the 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: 650kg Speed: 1.5mps Entrance size/ type: 1100 mm wide single speed center opening ***Rate or Lump Sum in Words:***	№			
	LIFTS REHABILITATION **TOTAL CARRIED TO COLLECTION**				

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4.6	UNINTERRUPTIBLE POWER SUPPLY (UPS)	.....
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General Summary
1024-Kherbet Rouha Mixed Public School



General Summary

Description	Amount (US $)
Bill № 2: Civil and Architectural Works ……	
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* Total Amount of Bill of Quantities ……	
* Discount by Tenderer (_____ %) ……	
* Total Amount of Tender (VAT Not Applicable) ……	

* Total Amount of Tender in Words:

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A. CHEHAB ARCHITECTS & ENGINEERS
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Bill № 2: Civil and Architectural Works



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**SITE PREPARATION AND DEMOLITION**				
1.1	**Demolishing and Removal of Debris**				
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. ***Rate or Lump Sum in Words:***	LS	1		
1.1a New Item	**Dismantling** The works include the dismantling works related to the newly installed water tanks and prefabricated units. - The contractor shall deliver the dismantled items to the Building administration / MEHE. ***Rate or Lump Sum in Words:***				
1.1.1.a New Item	Water Tanks ***Rate or Lump Sum in Words:***	№	2		
1.1.1.b New Item	Prefabricated Units ***Rate or Lump Sum in Words:***	№			
1.1.1.c New Item	Partitions of any type ***Rate or Lump Sum in Words:***	m2			
	SITE PREPARATION AND DEMOLITION **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**EXTERNAL WORKS**				
2.4 2.4.2	**School Fences with Related Gates** Rehabilitate Existing Fence (Strengthening & Rehabilitation) Work to include - Rehabilitate and support all the existing fence as per drawings - Determine the places that requires support - Preparation of shop drawings - Replace all broken elements - Redo all damaged elements and to be similar to existing elements - Finishing works as existing (plastering, paints, stone cladding, etc.) - Rehabilitate existing steel protection (Replace all damaged part by new similar to existing and paint with epoxy as specified) - Replace existing chain link by new one (Galvanized) - Reconstruct the broken and damaged parts and rehabilitate as it was with all similar materials including steel parts with related epoxy paint as per the engineer instructions ***Rate or Lump Sum in Words:***	m	60		
2.5 2.5.1	**Ramp for External Existing Sidewalk** 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 ***Rate or Lump Sum in Words:***	LS	1		
	EXTERNAL WORKS **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**CONCRETE** **Not Applicable**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
4	**MASONRY**				
	SITE PREPARATION AND DEMOLITION TOTAL CARRIED TO COLLECTION				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**METAL WORKS**				
5.1	**Provide New Steel Work (Door & Windows)**				
5.1.3	Provide new double glazed aluminum windows with new burglar proof protection ***Rate or Lump Sum in Words:***	№			
5.2	**Rehabilitate and Maintain the Existing Steel Work (Burglar Proof Protection + Opening)** 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 ***Rate or Lump Sum in Words:***	№			
5.2.7b New Item	Rehabilitate existing steel doors work to include all door accessories such as lock, handle and all necessary accessories. ***Rate or Lump Sum in Words:***	№			
5.5a **New Item**	**Steel Handrail** - Provide new metal handrail similar to exist with all all necessary accessories - Apply one layer of epoxy base paint - Apply putty - Apply epoxy paint as per specification All needed items as per the Engineer instructions				
5.5.1a New Item	Above Parapet ***Rate or Lump Sum in Words:***	m			
	METAL WORKS **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
6	**WOOD AND PLASTICS**				
6.1	**Joinery Works**				
6.1.1	**Rehabilitate Existing Kitchen Cupboards** 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 ***Rate or Lump Sum in Words:***	m	5		
6.1.2	**Rehabilitate Timber Cupboard** Rehabilitate timber cupboards with plastic laminate color, work to include sub framing, drawer units, shelves, fixing and fastening hardware, heavy duty ironmongery, accessories, including finish, soft close, painting and all other related auxiliaries works as required by engineer - 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. - (No patching is allowed for existing wooden works) ***Rate or Lump Sum in Words:***	m^2			
	WOOD AND PLASTICS **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
7	**THERMAL AND MOISTURE PROTECTION**				
7.0	**Preliminaries**				
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 ***Rate or Lump Sum in Words:***	LS	1		
7.1 7.1.1	**Roof Waterproofing** 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 & debris - 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/m³ where required - Provide Geotextile layers - Provide all aluminum flashing with mastic - Provide finishing material as required - All as specified and approved shop drawings ***Rate or Lump Sum in Words:***	m²	50		
	THERMAL AND MOISTURE PROTECTION **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8	**DOOR AND WINDOWS**				
8.1	**Wooden Doors and Windows** 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	**Timber Doors** 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				
8.1.1.2	Provide new single leaf wooden door with view frame ***Rate or Lump Sum in Words:***	№			
8.1.1.5	Provide new toilet doors with related accessories as per specifications ***Rate or Lump Sum in Words:***	№			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.1.3	**Rehabilitate the Existing Timber Doors** 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.				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.1.3.1.1	Rehabilitate and paint existing single leaf timber doors with related accessories ***Rate or Lump Sum in Words:***	№			
8.1.3.1.5a New Item	Supply and install wooden doors accessories (Handle - Lock - Etc…) ***Rate or Lump Sum in Words:***	№			
8.1.3.1.6a New Item	Replace broken glass of the wooden door view access window ***Rate or Lump Sum in Words:***	№			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
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)				
8.2.1.1	Provide new aluminum double glazed window & door panel ***Rate or Lump Sum in Words:***	№			
8.2.1.4	Replace existing elements by new single glazed aluminum windows (6mm) if the quantity of broken glass does not exceed 30% of whole building ***Rate or Lump Sum in Words:***	№			
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. ***Rate or Lump Sum in Words:***	№			
8.2.2.2	Provide new single glazed aluminum partition double leaf door ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
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 ***Rate or Lump Sum in Words:***	№			
8.2.3.1a New Item	Rehabilitate existing Doors ***Rate or Lump Sum in Words:***	№			
8.2.3.2a New Item	Rehabilitate existing aluminum Doors / Windows with all related accessories without Glass ***Rate or Lump Sum in Words:***	№	45		
	DOOR AND WINDOWS **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9	**FINISHES**				
9.1	**Cement Plaster** 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 9.1.1.1	**Internal and External Plaster Works** 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. ***Rate or Lump Sum in Words:***	m^2			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.1.2	**Repair of Existing Plaster (Internal - External) (Cracks, etc.)**				
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. Fill 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			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2	**Tiling Works (Similar to existing)** 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				
9.2.2 9.2.2.1	**New Glazed Colored Ceramic for Walls** Supply and install glazed colored ceramic for walls Include Ceramic Corner (first choice) ***Rate or Lump Sum in Words:***	m^2			
9.2.4 9.2.4.1	**Repair existing broken floor tiles and skirting (all types) and reinstall by new, similar to existing for all rooms and corridors** 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. ***Rate or Lump Sum in Words:***	LS			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2.4a New Item	**<u>Repair existing broken tiles (all types) and reinstall by new, similar to existing for toilets, drinking Basin and kitchen</u>**				
9.2.4.1a New Item	Rehabilitate and repair all damaged and broken tiles, 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. ***Rate or Lump Sum in Words:***	m^2			
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				
9.2.7.2	Type 2: Ceramic ***Rate or Lump Sum in Words:***	m^2			
9.2.7.3	Type 3: Mosaic ***Rate or Lump Sum in Words:***	m^2	600		
9.2.7.5	Type 5: Skirting (any type and size) ***Rate or Lump Sum in Words:***	m	1,000		
9.2.7.8a New Item	Type 8: Terrazzo ***Rate or Lump Sum in Words:***	m^2			
9.2.7.10a New Item	Type 10: Dismantling of the existing Faux parquet, Rehabilitate, Clean and Rub the Existing any type of flooring tiles and skirting ***Rate or Lump Sum in Words:***	m^2			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2.8	**<u>Clean the Existing Decorative Wall Tiles</u>** Rehabilitate any type of decorative wall tiles (mosaic - marble - etc.) Work to include: - All materials and labors - Grouting - Polish and rubbing - All needed items as per the Engineer instruction. - Works to be executed by experts				
9.2.8.4	Type 4: Terrazzo ***Rate or Lump Sum in Words:***	m²			
9.2.9	**<u>Colored PVC for Covered Indoor KG Playgrounds</u>** Supply and install first class safe and antibacterial colored P.V.C. flooring for indoor KG playgrounds at least 6mm thick (Design shape and colors of vinyl flooring should be approved by engineer prior to installation) Work to include: - Shop drawing for design, shape and colors of vinyl flooring should be submitted for each classroom separately for engineer approval - Laminate existing finish flooring after removing vinyl by special concrete material level - Make good and smooth the flooring - Apply self leveling special materials(if needed) to assume Vinyl best finishing - Remove all the existing skirting - Treat the place of the existing skirting - Place the special glue as specified - Place the flooring and screw the skirting P.V.C. profile Labors and materials, screw, etc. All needed items as per the Engineer instructions and approval. <u>Note</u>: Work should be executed by experts and should be executed in presence and approval of supervision engineer and as per required specifications for materials and executions. ***Rate or Lump Sum in Words:***	m²			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.3	**Suspended Ceilings (Similar to existing)** 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 specifications - 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	**Metal Sheet Strips Suspended Ceilings:**				
9.3.1.2	60 x 60 cm Aluminum Suspended Ceiling ***Rate or Lump Sum in Words:***	m^2			
9.4	**Gypsum Works (Similar to existing)**				
9.4.2	**Rehabilitate Existing Gypsum Suspended Ceiling (Tiles, Panels)**				
9.4.2.1	Rehabilitate existing gypsum board suspended ceiling n the case of damage or during construction. Works to include material, labor, equipment, etc. and to the engineer's approval ***Rate or Lump Sum in Words:***	m^2			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.5	**Painting**				
9.5.1	**Wall and Ceilings Paint Works** 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, ***All paint types must be lead-free and Low VOC (Volatile Organic Compounds)***				
9.5.1.1	Super Rubber Paint for new walls and ceilings ***Rate or Lump Sum in Words:***	m²			
9.5.1.2	Super Rubber Paint for old walls and ceilings ***Rate or Lump Sum in Words:***	m²	500		
9.5.1.3	Oil Paint for new walls and ceilings ***Rate or Lump Sum in Words:***	m²			
9.5.1.4	Oil Paints for old walls and ceilings ***Rate or Lump Sum in Words:***	m²	1,000		

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.5.2 9.5.2.1	**<u>Outside Walls Paint (Old and New Walls and Ceilings)</u>** 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. ***Rate or Lump Sum in Words:***	m^2			
9.5.6	**<u>Epoxy coating (Playground -covered indoor Car Parking)</u>**				
9.5.6.5a New Item	For Roof ***Rate or Lump Sum in Words:***	m^2			
	FINISHES **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10	**SPECIALTIES**				
10.1	**Bathrooms Accessories** - 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				
10.1.1 10.1.1.1	**Paper Roller Holder** Supply and install paper holder no rust, no stain stainless steel 316 with all accessories and fixation (anti-rust materials) for good quality and at the places shown on drawings All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	№			
10.1.2 10.1.2.1	**Soap Dispenser** Supply and install stainless steel 316 no rust, no stain, soap dispenser wall type fixation (anti-rust materials and accessories) with all needed items All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	№			
10.1.3 10.1.3.1	**Paper Holder Box** Supply and install paper holder box from stainless steel 316 no rust, no stain, with all needed works and fixation (anti-rust materials and accessories) The box should be from a good manufacturer All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	№			
10.1.4	**Mirror for Lavatories** 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 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) ***Rate or Lump Sum in Words:***	№	8		

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10.1.5	**<u>Handicapped Bathroom Accessories</u>** - Remove and cart away old damaged fixtures Supply and install all needed bars for the handicapped toilet of stainless steel 316 Work to include: - Materials - Labors - and all needed items as per the Engineer instructions				
10.1.5.1	Supply and install vertical grab rail 60cm bars ***Rate or Lump Sum in Words:***	№			
10.1.5.2	Supply and install Horizontal grab rail 60cm bars ***Rate or Lump Sum in Words:***	№			
10.1.5.3	Supply and install Drop Down Rail removable arm 80cm ***Rate or Lump Sum in Words:***	№			
10.1.5.4	Alarm pull cord for emergency ***Rate or Lump Sum in Words:***	№			
10.1.5.5a New Item	Supply and install partition between urinals similar to existing with all needed fixation accessories ***Rate or Lump Sum in Words:***	№			
10.2	**Classroom Specialties**				
10.2.1 10.2.1.1	**<u>White Teaching Boards</u>** Supply and install White teaching boards from approved manufacturer as per specifications of Ministry of Education and Higher Education and corresponding to the site Cost to include: - (3600mm x 1200mm) final dimensions as per site limitation - Materials and labors - Felt marker pens and eraser (12 marker pens + 2 erases for each white board) - Stainless Steel screws - Remove the existing board - All needed works as per the Engineer instructions ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10.3	**Resin Work**				
10.3.1	**Drinking Basin** 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) ***Rate or Lump Sum in Words:***	№			
10.3.1.7a New Item	Rehabilitation of existing Drinking Basin - Any Length (Traps, Taps, Cleaning and repair of any damaged elements) ***Rate or Lump Sum in Words:***	№			
10.3.4	**Kitchen Counter** 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				
10.3.4.3	Kitchen Counter - Length (1.76 to 2.05 m) ***Rate or Lump Sum in Words:***	№			
10.5	**Internal Curtains** Supply and install internal rolling type tissue and polyester collapsible type curtain as per specifications and at the location as shown on drawings Works to include: - Materials - Labors - Heavy Duty Accessories - All needed works as per the Engineer instructions and approval				
10.5.1	On External Opening ***Rate or Lump Sum in Words:***	m²	100		
	SPECIALTIES **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
11	**EQUIPMENT**				
	EQUIPMENT **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
12	**FURNISHINGS**				
12.1	**INSTITUTIONAL FURNITURE** Supply and install the following institutional furniture complete including all necessary fixing and accessories, all as specified, shown on the drawings and to the satisfaction of the Engineer.				
12.1.1	**Classrooms Furniture**				
12.1.1.1	Standard desk with chair for classroom, single seat. ***Rate or Lump Sum in Words:***	№			
12.1.2	**Conference Room Furniture**				
12.1.2.1	Standard table. ***Rate or Lump Sum in Words:***	№			
12.1.2.2	Standard chairs. ***Rate or Lump Sum in Words:***	№			
12.1.6 12.1.6.1	**Hooks with Rails for Hats and Coats** Hooks with rails for hats and coats, rail size 120mm high x 20mm thick, softwood, treated and painted, countersunk screwed to wall & painted steel hooks every 200 mm (5№ hooks per linear meter of rail). ***Rate or Lump Sum in Words:***	lm			
	FURNISHINGS **TOTAL CARRIED TO COLLECTION**				

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Bill № 3: Mechanical Engineering Services



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**GENERAL TECHNICAL REQUIREMENTS**				
1.1	**General Mechanical Requirements**				
1.1.1	Revise all Mechanical drawings and make sure that they can be executed properly. ***Rate or Lump Sum in Words:***	Item			
1.2	**Rehabilitation Works General Requirements** 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, floor drains, roof drains, manholes, pumps, WC tanks, adding where applicable all necessary valves, flush valves, etc., and all other necessary works. ***Rate or Lump Sum in Words:***	Item	1		
1.2.2	Maintenance and rehabilitation of existing HVAC & fire fighting systems, including all necessary piping, duct works, pumps and controls, fans, mechanical works inside shafts, air conditioning units, etc. ***Rate or Lump Sum in Words:***	Item			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1.2.3a New Item	Contractor Shall remove existing, newly added showers. Works to include - Removal of fixtures (Shower head or hand) - Replacement of damaged tiles by new one similar to existing. All other nessessary works (Finishes and mechanical works) ***Rate or Lump Sum in Words:***	№	14		
1.2.4a New Item	Contractor Shall remove existing, newly added Water Heater . Works to include - Removal of all pipes and accessories - Replacement of damaged tiles by new one similar to existing. All other nessessary works (Finishes and mechanical works) ***Rate or Lump Sum in Words:***	№	3		
	GENERAL TECHNICAL REQUIREMENTS **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION**				
2.3	**Drain Cover** Supply and install floor drain cover (P.E) 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 Engineer instructions				
2.3.1	Cover for FCO ***Rate or Lump Sum in Words:***	№			
	SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**WATER PIPE WORK INSTALLATION**				
3.2	**Electrical Water Heater** Electrical water heater as specified and scheduled; include pipe work connections, temperature and pressure gauges, control and power wiring from the MCC, hot water and pipe work connections, control and high limit control valves, isolation and safety valves, thermal insulation, valve boxes, bonding and identification, and the heater should be of a good trade mark of European or west made or first class Lebanese product.				
3.2.2	EWH-02 (100 L) ***Rate or Lump Sum in Words:***	№			
	WATER PIPE WORK INSTALLATION TOTAL CARRIED TO COLLECTION				
4	**FIRE PROTECTION**				
	FIRE PROTECTION TOTAL CARRIED TO COLLECTION				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**SANITARY FIXTURES**				
5.2	**W.C. For Non Kids** 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 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)				
5.2.1	EWC-01 (Wall Hang - 52 x 36 cm) ***Rate or Lump Sum in Words:***	№	1		
5.2.3a New Item	EWC Accessories (Seat Cover - Flush Tank Cover / Push Button Etc…) ***Rate or Lump Sum in Words:***	№	10		
5.4	**Lavatories for Non Kids** Supply and install semi pedestal wash basin similar to Ideal Standard No. 742001 or approved equal 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) ***Rate or Lump Sum in Words:***	№			
5.4.2	LAV-02 (wall hang, handicapped with mixers 56 x 41 cm) ***Rate or Lump Sum in Words:***	№			
5.4.3a	LAV accessories (Traps - Mixers - Fixation, Etc…) ***Rate or Lump Sum in Words:***	№			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5.5	**Urinal** Supply and installation of high quality urinal units complete with proper wall fixation with anti-dust materials including drainage & water supply connection as per the approved shop drawings. Cost to include all necessary accessories, valves, sensors to provide workable system.				
5.5.1	Urinal ***Rate or Lump Sum in Words:***	№			
5.6	**Self Close Taps on Kids & Students Lavatories** Supply and install self close taps to be fixed in the lavatory body as manufactured by Grohe Item No. 36-173 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 ***Rate or Lump Sum in Words:***	№	5		
5.7	**Wall Type Self Close Taps on Drinking Basins** Supply and install self close taps to be fixed in the drinking basin body as manufactured by Grohe Item No. 36-176 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 ***Rate or Lump Sum in Words:***	№	10		
5.8	**Kitchen Sink Accessories** Supply and install kitchen sink accessories such as chrome trap, angle valve, mixers as specified				
5.8.1	Kitchen Sink Accessories ***Rate or Lump Sum in Words:***	№	2		

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5.10	**Lavatories Resin Accessories** Supply and install lavatories resin accessories such as chrome trap, angle valves as specified				
5.10.1	Lavatories Resin Accessories ***Rate or Lump Sum in Words:***	№			
5.14	**Hose Bib** Supply and install Hose Bib taps including water connection & all necessary accessories as required				
5.14.1	HB - 01 ***Rate or Lump Sum in Words:***	№			
5.14.2a New Item	Maintenace of Potable Water System Contractor shall ensure proper functionality of the system ***Rate or Lump Sum in Words:***	Item			
5.14.3a New Item	Rehabilitation of existing septic tank, including cleaning, crack and joint sealing, waterproofing, replacement of damaged fittings, and all necessary works to restore watertightness and proper operation ***Rate or Lump Sum in Words:***	Item			
	SANITARY FIXTURES **TOTAL CARRIED TO COLLECTION**				

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3.3	WATER PIPE WORK INSTALLATION	.....
3.4	FIRE PROTECTION	.....
3.5	SANITARY FIXTURES	.....
	Total Carried to General Summary	.....

Bill № 4: Electrical Engineering Services



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**BASIC ELECTRICAL REQUIREMENTS** 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	**Fixing and Repairing** 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 ***Rate or Lump Sum in Words:***	LS	1		
1.1.2	Wires and cables ***Rate or Lump Sum in Words:***	LS			
1.1.3	Sockets and switches ***Rate or Lump Sum in Words:***	LS	1		
1.1.4	Circuit breakers ***Rate or Lump Sum in Words:***	LS			
1.1.5	Disconnecting switches ***Rate or Lump Sum in Words:***	LS			
	BASIC ELECTRICAL REQUIREMENTS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**PANELBOARDS**				
2.2	**Computer Lab Panel Board (Rehabilitation)**				
2.2.1	Rehabilitate and install the Computer Lab Panel Board, works to include: - Rehabilitation and connection - Wires installation - Accessories - All Accessories Failed Complete to shop drawings and to the satisfaction of the engineer (ready to use) ***Rate or Lump Sum in Words:***	№			
2.3a New Item	Supply and Install New Panel Board Cover ***Rate or Lump Sum in Words:***	№			
	PANELBOARDS **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**GENERAL LIGHTING INSTALLATIONS**				
3.1	**Lighting Fixtures** 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 φ ≥ 0.9 ***Rate or Lump Sum in Words:***	№			
3.1.2	Replace existing lighting fixtures with C1 ***Rate or Lump Sum in Words:***	№			
3.1.3	TYPE C2: as same as TYPE C1 but Pendent mounted ***Rate or Lump Sum in Words:***	№			
3.1.4	TYPE A2 / A3: 600x600 mm LED Panel 3600lm, 33W, 4000K, 80CRI surface-mount/recessed, die-cast aluminum, IP20 ***Rate or Lump Sum in Words:***	№			
3.1.5	TYPE A1: as same as TYPE A2 but Pendent mounted ***Rate or Lump Sum in Words:***	№			
3.1.6	TYPE N4 / N3: LED - 900lm - 12.5W - 3000K - 80CRI - WW Surface mounted / Recessed Downlight Round - 120 deg ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3.1.7	TYPE F: PLAFONIERA OVAL Wall mounted - IP54 Aluminum die-cast housing IK 06 - CLASS I Lamp SHOULD BE LED 900Lm, 4000K, 17W. ***Rate or Lump Sum in Words:***	№			
3.1.8	TYPE W: A++ / COB LED 3000K 230V CRI 90 - 3955lm - 42W IP65 - IK07 - Die-cast EN AB-47100 aluminum housing with high corrosion resistance. ***Rate or Lump Sum in Words:***	№			
3.1.9	TYPE L (LED): OVAL 18W 516Lm IP54 IK06 FOR LIFT & TECHNICAL SHAFTS. Wall mounted luminaire Aluminum die cast housing in EN AB-47100 (low copper content) with high resistance against corrosion. IK 06 Sand blasted glass diffuser. Lamp fixed position. LOR 43% Isolation: CLASS I. Black (cod.09). Lamp not included. ***Rate or Lump Sum in Words:***	№			
3.1.10	Replace Existing lighting fixtures with TYPE L (LED) ***Rate or Lump Sum in Words:***	№			
3.1.11	TYPE M: LED - 1500lm - 17W - 4000K - 80CRI - Ceiling mounted - With Motion Sensor. ***Rate or Lump Sum in Words:***	№			
3.1.12	Replace Existing lighting fixtures with TYPE M ***Rate or Lump Sum in Words:***	№			
3.1.13	TYPE EM: Ceiling Emergency Ceiling mounted non-maintained 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65. ***Rate or Lump Sum in Words:***	№			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3.1.14	Replace Existing EM with LED Emergency ***Rate or Lump Sum in Words:***	№			
3.1.15	TYPE EM: Wall Emergency Wall mounted non-maintained, 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65. ***Rate or Lump Sum in Words:***	№			
3.1.16	TYPE EX: Exit sign LED light wall/ceiling mounted maintained, 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65 with engraved letters on fixtures ***Rate or Lump Sum in Words:***	№			
3.1.17	Replace Existing Exit with LED Exits ***Rate or Lump Sum in Words:***	№			
3.1.18	TYPE H: High Bay LED Lightning fixture pendent 100W, 220V, 50Hz. ***Rate or Lump Sum in Words:***	№			
	GENERAL LIGHTING INSTALLATIONS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
4	**FIRE ALARM SYSTEM**				
	FIRE ALARM SYSTEM TOTAL CARRIED TO COLLECTION				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**DATA SYSTEM**				
	DATA SYSTEM **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
6	**UNINTERRUPTIBLE POWER SUPPLY (UPS)**				
	UNINTERRUPTIBLE POWER SUPPLY (UPS) TOTAL CARRIED TO COLLECTION				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
7	**CCTV SYSTEM** Supply, install, connect and test CCTV system complete with conduits installations from the location of the NVR through the different CCTV camera outlets, including the pull or draw boxes and derivation boxes, the junction and outlet boxes, 19" Rack, and all necessary connections to the management station as shown on drawings as per Tender Specifications and the like to the satisfaction of the supervision engineer.				
7.3a New Item	Replace existing Cameras by new one Similar to existing ***Rate or Lump Sum in Words:***	№			
	CCTV SYSTEM **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8	**SOLAR SYSTEM**				
8.1	Supply, install, connect and test the solar lighting system for all Electrical Loads (excluding Lifts, Pumps and AC Units) in perfect operating conditions, including but not limited to: - Photovoltaic multi-crystalline solar panels as shown on the drawings. - Hybrid Inverter - All cables, wires, conduits and all necessary accessories - Aluminum PV mountings - The Contractor shall ensure complete solar system which should function as the main Power Supply - The Contractor should submit detailed shop drawings and materials for approval. - For all blocks of the schools - Lithium Batteries for (Off-Grid Solar Types) - All necessary elevated structures on roof and other areas which are needed to install the required solar panel as mentioned on drawings (Sheds, Parking, etc.) areas ***Rate or Lump Sum in Words:***	LS			
8.1.2a	Replace Unfuctional Battery by new one similar to existing				
8.1.2.1a	Deye BOS-G 51.2 kWh High-Voltage $LiFePO_4$ Battery Energy Storage System – Complete Supply, Installation, Testing & Commissioning ***Rate or Lump Sum in Words:***	№			
8.1.2.1b	Deye BOS-GM5.1 HV $LiFePO_4$ Battery, 51.2 V, 100 Ah, 5.12 kWh, including installation, testing and commissioning ***Rate or Lump Sum in Words:***	№			
8.1.2.1c	Acid Battery, 12 V, 250 Ah ***Rate or Lump Sum in Words:***	№			
	SOLAR SYSTEM **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9	**BELL SYSTEM**				
	BELL SYSTEM **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10	**LIFTS REHABILITATION**				
10.1	Rehabilitation of the 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: 650kg Speed: 1.5mps Entrance size/ type: 1100 mm wide single speed center opening ***Rate or Lump Sum in Words:***	№1			
	LIFTS REHABILITATION **TOTAL CARRIED TO COLLECTION**				

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General Summary
1027-Kfardanis Intermediate Public School



General Summary

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Bill № 2: Civil and Architectural Works



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**SITE PREPARATION AND DEMOLITION**				
1.1	**Demolishing and Removal of Debris**				
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. ***Rate or Lump Sum in Words:***	LS	1		
1.1a New Item	**Dismantling** The works include the dismantling works related to the newly installed water tanks and prefabricated units. - The contractor shall deliver the dismantled items to the Building administration / MEHE. ***Rate or Lump Sum in Words:***				
1.1.1.a New Item	Water Tanks ***Rate or Lump Sum in Words:***	№	2		
1.1.1.b New Item	Prefabricated Units ***Rate or Lump Sum in Words:***	№			
1.1.1.c New Item	Partitions of any type ***Rate or Lump Sum in Words:***	m2			
	SITE PREPARATION AND DEMOLITION **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**EXTERNAL WORKS**				
2.4 2.4.2	**School Fences with Related Gates** Rehabilitate Existing Fence (Strengthening & Rehabilitation) Work to include - Rehabilitate and support all the existing fence as per drawings - Determine the places that requires support - Preparation of shop drawings - Replace all broken elements - Redo all damaged elements and to be similar to existing elements - Finishing works as existing (plastering, paints, stone cladding, etc.) - Rehabilitate existing steel protection (Replace all damaged part by new similar to existing and paint with epoxy as specified) - Replace existing chain link by new one (Galvanized) - Reconstruct the broken and damaged parts and rehabilitate as it was with all similar materials including steel parts with related epoxy paint as per the engineer instructions ***Rate or Lump Sum in Words:***	m			
2.5 2.5.1	**Ramp for External Existing Sidewalk** 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 ***Rate or Lump Sum in Words:***	LS			
	EXTERNAL WORKS **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**CONCRETE** **Not Applicable**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
4	**MASONRY**				
	SITE PREPARATION AND DEMOLITION **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**METAL WORKS**				
5.1	**Provide New Steel Work (Door & Windows)**				
5.1.3	Provide new double glazed aluminum windows with new burglar proof protection ***Rate or Lump Sum in Words:***	№			
5.2	**Rehabilitate and Maintain the Existing Steel Work (Burglar Proof Protection + Opening)** 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 ***Rate or Lump Sum in Words:***	№			
5.2.7b New Item	Rehabilitate existing steel doors work to include all door accessories such as lock, handle and all necessary accessories. ***Rate or Lump Sum in Words:***	№			
5.5a New Item	**Steel Handrail** - Provide new metal handrail similar to exist with all all necessary accessories - Apply one layer of epoxy base paint - Apply putty - Apply epoxy paint as per specification All needed items as per the Engineer instructions				
5.5.1a New Item	Above Parapet ***Rate or Lump Sum in Words:***	m			
	METAL WORKS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
6	**WOOD AND PLASTICS**				
6.1	**Joinery Works**				
6.1.1	**Rehabilitate Existing Kitchen Cupboards** 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 ***Rate or Lump Sum in Words:***	m			
6.1.2	**Rehabilitate Timber Cupboard** Rehabilitate timber cupboards with plastic laminate color, work to include sub framing, drawer units, shelves, fixing and fastening hardware, heavy duty ironmongery, accessories, including finish, soft close, painting and all other related auxiliaries works as required by engineer - 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. - (No patching is allowed for existing wooden works) ***Rate or Lump Sum in Words:***	m^2			
	WOOD AND PLASTICS **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
7	**THERMAL AND MOISTURE PROTECTION**				
7.0	**Preliminaries**				
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 ***Rate or Lump Sum in Words:***	LS			
7.1 7.1.1	**Roof Waterproofing** 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 & debris - 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/m³ where required - Provide Geotextile layers - Provide all aluminum flashing with mastic - Provide finishing material as required - All as specified and approved shop drawings ***Rate or Lump Sum in Words:***	m²			
	THERMAL AND MOISTURE PROTECTION **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8	**DOOR AND WINDOWS**				
8.1	**Wooden Doors and Windows** 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	**Timber Doors** 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				
8.1.1.2	Provide new single leaf wooden door with view frame ***Rate or Lump Sum in Words:***	№			
8.1.1.5	Provide new toilet doors with related accessories as per specifications ***Rate or Lump Sum in Words:***	№			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.1.3	**Rehabilitate the Existing Timber Doors** 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.				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.1.3.1.1	Rehabilitate and paint existing single leaf timber doors with related accessories ***Rate or Lump Sum in Words:***	№			
8.1.3.1.5a New Item	Supply and install wooden doors accessories (Handle - Lock - Etc…) ***Rate or Lump Sum in Words:***	№			
8.1.3.1.6a New Item	Replace broken glass of the wooden door view access window ***Rate or Lump Sum in Words:***	№			



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.2	**Aluminum Doors and Windows** 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	**New Aluminum Panels (Double Glass)** Supply and install the fabricated aluminum panels with double glass (6 - 12 - 6 mm) (Outer Glass should be Tempered)				
8.2.1.1	Provide new aluminum double glazed window & door panel ***Rate or Lump Sum in Words:***	№			
8.2.1.4	Replace existing elements by new single glazed aluminum windows (6mm) if the quantity of broken glass does not exceed 30% of whole building ***Rate or Lump Sum in Words:***	№			
8.2.2	**New Aluminum Internal Door** 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. ***Rate or Lump Sum in Words:***	№			
8.2.2.2	Provide new single glazed aluminum partition double leaf door ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
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 ***Rate or Lump Sum in Words:***	№			
8.2.3.1a New Item	Rehabilitate existing Doors ***Rate or Lump Sum in Words:***	№			
8.2.3.2a New Item	Rehabilitate existing aluminum Doors / Windows with all related accessories without Glass ***Rate or Lump Sum in Words:***	№			
	DOOR AND WINDOWS **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9	**FINISHES**				
9.1	**Cement Plaster** 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 9.1.1.1	**Internal and External Plaster Works** 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. ***Rate or Lump Sum in Words:***	m^2			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.1.2	**Repair of Existing Plaster (Internal - External) (Cracks, etc.)**				
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. Fill 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			



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2	**Tiling Works (Similar to existing)** 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				
9.2.2 9.2.2.1	**New Glazed Colored Ceramic for Walls** Supply and install glazed colored ceramic for walls Include Ceramic Corner (first choice) ***Rate or Lump Sum in Words:***	m^2			
9.2.4 9.2.4.1	**Repair existing broken floor tiles and skirting (all types) and reinstall by new, similar to existing for all rooms and corridors** 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. ***Rate or Lump Sum in Words:***	LS	1		

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2.4a New Item	**<u>Repair existing broken tiles (all types) and reinstall by new, similar to existing for toilets, drinking Basin and kitchen</u>**				
9.2.4.1a New Item	Rehabilitate and repair all damaged and broken tiles, 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. ***Rate or Lump Sum in Words:***	m²			
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				
9.2.7.2	Type 2: Ceramic ***Rate or Lump Sum in Words:***	m²			
9.2.7.3	Type 3: Mosaic ***Rate or Lump Sum in Words:***	m²	300		
9.2.7.5	Type 5: Skirting (any type and size) ***Rate or Lump Sum in Words:***	m	150		
9.2.7.8a New Item	Type 8: Terrazzo ***Rate or Lump Sum in Words:***	m²			
9.2.7.10a New Item	Type 10: Dismantling of the existing Faux parquet, Rehabilitate, Clean and Rub the Existing any type of flooring tiles and skirting ***Rate or Lump Sum in Words:***	m²			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2.8	**<u>Clean the Existing Decorative Wall Tiles</u>** Rehabilitate any type of decorative wall tiles (mosaic - marble - etc.) Work to include: - All materials and labors - Grouting - Polish and rubbing - All needed items as per the Engineer instruction. - Works to be executed by experts				
9.2.8.4	Type 4: Terrazzo ***Rate or Lump Sum in Words:***	m²			
9.2.9	**<u>Colored PVC for Covered Indoor KG Playgrounds</u>** Supply and install first class safe and antibacterial colored P.V.C. flooring for indoor KG playgrounds at least 6mm thick (Design shape and colors of vinyl flooring should be approved by engineer prior to installation) Work to include: - Shop drawing for design, shape and colors of vinyl flooring should be submitted for each classroom separately for engineer approval - Laminate existing finish flooring after removing vinyl by special concrete material level - Make good and smooth the flooring - Apply self leveling special materials(if needed) to assume Vinyl best finishing - Remove all the existing skirting - Treat the place of the existing skirting - Place the special glue as specified - Place the flooring and screw the skirting P.V.C. profile Labors and materials, screw, etc. All needed items as per the Engineer instructions and approval. <u>Note</u>: Work should be executed by experts and should be executed in presence and approval of supervision engineer and as per required specifications for materials and executions. ***Rate or Lump Sum in Words:***	m²			



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.3	**Suspended Ceilings (Similar to existing)** 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 specifications - 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	**Metal Sheet Strips Suspended Ceilings:**				
9.3.1.2	60 x 60 cm Aluminum Suspended Ceiling ***Rate or Lump Sum in Words:***	m²			
9.4	**Gypsum Works (Similar to existing)**				
9.4.2	**Rehabilitate Existing Gypsum Suspended Ceiling (Tiles, Panels)**				
9.4.2.1	Rehabilitate existing gypsum board suspended ceiling n the case of damage or during construction. Works to include material, labor, equipment, etc. and to the engineer's approval ***Rate or Lump Sum in Words:***	m²			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.5	**Painting**				
9.5.1	**Wall and Ceilings Paint Works** 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, ***All paint types must be lead-free and Low VOC (Volatile Organic Compounds)***				
9.5.1.1	Super Rubber Paint for new walls and ceilings ***Rate or Lump Sum in Words:***	m²			
9.5.1.2	Super Rubber Paint for old walls and ceilings ***Rate or Lump Sum in Words:***	m²	600		
9.5.1.3	Oil Paint for new walls and ceilings ***Rate or Lump Sum in Words:***	m²			
9.5.1.4	Oil Paints for old walls and ceilings ***Rate or Lump Sum in Words:***	m²	500		

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
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. ***Rate or Lump Sum in Words:***	m²			
9.5.6	**<u>Epoxy coating (Playground -covered indoor Car Parking)</u>**				
9.5.6.5a New Item	For Roof ***Rate or Lump Sum in Words:***	m²			
	FINISHES **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10	**SPECIALTIES**				
10.1	**Bathrooms Accessories** - 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				
10.1.1 10.1.1.1	**Paper Roller Holder** Supply and install paper holder no rust, no stain stainless steel 316 with all accessories and fixation (anti-rust materials) for good quality and at the places shown on drawings All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	№			
10.1.2 10.1.2.1	**Soap Dispenser** Supply and install stainless steel 316 no rust, no stain, soap dispenser wall type fixation (anti-rust materials and accessories) with all needed items All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	№			
10.1.3 10.1.3.1	**Paper Holder Box** Supply and install paper holder box from stainless steel 316 no rust, no stain, with all needed works and fixation (anti-rust materials and accessories) The box should be from a good manufacturer All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	№			
10.1.4	**Mirror for Lavatories** 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 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) ***Rate or Lump Sum in Words:***	№	3		

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10.1.5	**<u>Handicapped Bathroom Accessories</u>** - Remove and cart away old damaged fixtures Supply and install all needed bars for the handicapped toilet of stainless steel 316 Work to include: - Materials - Labors - and all needed items as per the Engineer instructions				
10.1.5.1	Supply and install vertical grab rail 60cm bars ***Rate or Lump Sum in Words:***	№			
10.1.5.2	Supply and install Horizontal grab rail 60cm bars ***Rate or Lump Sum in Words:***	№			
10.1.5.3	Supply and install Drop Down Rail removable arm 80cm ***Rate or Lump Sum in Words:***	№			
10.1.5.4	Alarm pull cord for emergency ***Rate or Lump Sum in Words:***	№			
10.1.5.5a New Item	Supply and install partition between urinals similar to existing with all needed fixation accessories ***Rate or Lump Sum in Words:***	№			
10.2	**Classroom Specialties**				
10.2.1 10.2.1.1	**<u>White Teaching Boards</u>** Supply and install White teaching boards from approved manufacturer as per specifications of Ministry of Education and Higher Education and corresponding to the site Cost to include: - (3600mm x 1200mm) final dimensions as per site limitation - Materials and labors - Felt marker pens and eraser (12 marker pens + 2 erases for each white board) - Stainless Steel screws - Remove the existing board - All needed works as per the Engineer instructions ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10.3	**Resin Work**				
10.3.1	**Drinking Basin** 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) ***Rate or Lump Sum in Words:***	№			
10.3.1.7a New Item	Rehabilitation of existing Drinking Basin - Any Length (Traps, Taps, Cleaning and repair of any damaged elements) ***Rate or Lump Sum in Words:***	№	1		
10.3.4	**Kitchen Counter** 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				
10.3.4.3	Kitchen Counter - Length (1.76 to 2.05 m) ***Rate or Lump Sum in Words:***	№			
10.5	**Internal Curtains** Supply and install internal rolling type tissue and polyester collapsible type curtain as per specifications and at the location as shown on drawings Works to include: - Materials - Labors - Heavy Duty Accessories - All needed works as per the Engineer instructions and approval				
10.5.1	On External Opening ***Rate or Lump Sum in Words:***	m²	100		
	SPECIALTIES **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
11	**EQUIPMENT**				
	EQUIPMENT **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
12	**FURNISHINGS**				
12.1	**INSTITUTIONAL FURNITURE** Supply and install the following institutional furniture complete including all necessary fixing and accessories, all as specified, shown on the drawings and to the satisfaction of the Engineer.				
12.1.1	**Classrooms Furniture**				
12.1.1.1	Standard desk with chair for classroom, single seat. ***Rate or Lump Sum in Words:***	№			
12.1.2	**Conference Room Furniture**				
12.1.2.1	Standard table. ***Rate or Lump Sum in Words:***	№			
12.1.2.2	Standard chairs. ***Rate or Lump Sum in Words:***	№			
12.1.6 12.1.6.1	**Hooks with Rails for Hats and Coats** Hooks with rails for hats and coats, rail size 120mm high x 20mm thick, softwood, treated and painted, countersunk screwed to wall & painted steel hooks every 200 mm (5№ hooks per linear meter of rail). ***Rate or Lump Sum in Words:***	lm			
	FURNISHINGS **TOTAL CARRIED TO COLLECTION**				

Collection

Page №		Amount (US $)
2.1	SITE PREPARATION AND DEMOLITION	.....
2.2	EXTERNAL WORKS	.....
2.3	CONCRETE	.....
2.4	MASONRY	.....
2.5	METAL WORKS	.....
2.6	WOOD AND PLASTICS	.....
2.7	THERMAL AND MOISTURE PROTECTION	.....
2.8	DOOR AND WINDOWS	.....
2.9	FINISHES	.....
2.10	SPECIALTIES	.....
2.11	EQUIPMENT	.....
2.12	FURNISHINGS	.....
	Total Carried to General Summary	.....



Bill № 3: Mechanical Engineering Services



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**GENERAL TECHNICAL REQUIREMENTS**				
1.1	**General Mechanical Requirements**				
1.1.1	Revise all Mechanical drawings and make sure that they can be executed properly. ***Rate or Lump Sum in Words:***	Item			
1.2	**Rehabilitation Works General Requirements** 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, floor drains, roof drains, manholes, pumps, WC tanks, adding where applicable all necessary valves, flush valves, etc., and all other necessary works. ***Rate or Lump Sum in Words:***	Item	1		
1.2.2	Maintenance and rehabilitation of existing HVAC & fire fighting systems, including all necessary piping, duct works, pumps and controls, fans, mechanical works inside shafts, air conditioning units, etc. ***Rate or Lump Sum in Words:***	Item			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1.2.3a New Item	Contractor Shall remove existing, newly added showers. Works to include - Removal of fixtures (Shower head or hand) - Replacement of damaged tiles by new one similar to existing. All other nessessary works (Finishes and mechanical works) ***Rate or Lump Sum in Words:***	№	4		
1.2.4a New Item	Contractor Shall remove existing, newly added Water Heater . Works to include - Removal of all pipes and accessories - Replacement of damaged tiles by new one similar to existing. All other nessessary works (Finishes and mechanical works) ***Rate or Lump Sum in Words:***	№	2		
	GENERAL TECHNICAL REQUIREMENTS **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION**				
2.3	**Drain Cover** Supply and install floor drain cover (P.E) 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 Engineer instructions				
2.3.1	Cover for FCO ***Rate or Lump Sum in Words:***	№			
	SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**WATER PIPE WORK INSTALLATION**				
3.2	**Electrical Water Heater** Electrical water heater as specified and scheduled; include pipe work connections, temperature and pressure gauges, control and power wiring from the MCC, hot water and pipe work connections, control and high limit control valves, isolation and safety valves, thermal insulation, valve boxes, bonding and identification, and the heater should be of a good trade mark of European or west made or first class Lebanese product.				
3.2.2	EWH-02 (100 L) ***Rate or Lump Sum in Words:***	№			
	WATER PIPE WORK INSTALLATION TOTAL CARRIED TO COLLECTION				
4	**FIRE PROTECTION**				
	FIRE PROTECTION TOTAL CARRIED TO COLLECTION				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**SANITARY FIXTURES**				
5.2	**W.C. For Non Kids** 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 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)				
5.2.1	EWC-01 (Wall Hang - 52 x 36 cm) ***Rate or Lump Sum in Words:***	№			
5.2.3a New Item	EWC Accessories (Seat Cover - Flush Tank Cover / Push Button Etc…) ***Rate or Lump Sum in Words:***	№	10		
5.4	**Lavatories for Non Kids** Supply and install semi pedestal wash basin similar to Ideal Standard No. 742001 or approved equal 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) ***Rate or Lump Sum in Words:***	№	10		
5.4.2	LAV-02 (wall hang, handicapped with mixers 56 x 41 cm) ***Rate or Lump Sum in Words:***	№			
5.4.3a	LAV accessories (Traps - Mixers - Fixation, Etc…) ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5.5	**Urinal** Supply and installation of high quality urinal units complete with proper wall fixation with anti-dust materials including drainage & water supply connection as per the approved shop drawings. Cost to include all necessary accessories, valves, sensors to provide workable system.				
5.5.1	Urinal ***Rate or Lump Sum in Words:***	№			
5.6	**Self Close Taps on Kids & Students Lavatories** Supply and install self close taps to be fixed in the lavatory body as manufactured by Grohe Item No. 36-173 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 ***Rate or Lump Sum in Words:***	№	12		
5.7	**Wall Type Self Close Taps on Drinking Basins** Supply and install self close taps to be fixed in the drinking basin body as manufactured by Grohe Item No. 36-176 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 ***Rate or Lump Sum in Words:***	№			
5.8	**Kitchen Sink Accessories** Supply and install kitchen sink accessories such as chrome trap, angle valve, mixers as specified				
5.8.1	Kitchen Sink Accessories ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5.10	**Lavatories Resin Accessories** Supply and install lavatories resin accessories such as chrome trap, angle valves as specified				
5.10.1	Lavatories Resin Accessories ***Rate or Lump Sum in Words:***	№			
5.14	**Hose Bib** Supply and install Hose Bib taps including water connection & all necessary accessories as required				
5.14.1	HB - 01 ***Rate or Lump Sum in Words:***	№	10		
5.14.2a New Item	Maintenace of Potable Water System Contractor shall ensure proper functionality of the system ***Rate or Lump Sum in Words:***	Item			
5.14.3a New Item	Rehabilitation of existing septic tank, including cleaning, crack and joint sealing, waterproofing, replacement of damaged fittings, and all necessary works to restore watertightness and proper operation ***Rate or Lump Sum in Words:***	Item			
	SANITARY FIXTURES **TOTAL CARRIED TO COLLECTION**				

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Bill № 4: Electrical Engineering Services



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**BASIC ELECTRICAL REQUIREMENTS** 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	**Fixing and Repairing** 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 ***Rate or Lump Sum in Words:***	LS	1		
1.1.2	Wires and cables ***Rate or Lump Sum in Words:***	LS	1		
1.1.3	Sockets and switches ***Rate or Lump Sum in Words:***	LS	1		
1.1.4	Circuit breakers ***Rate or Lump Sum in Words:***	LS	1		
1.1.5	Disconnecting switches ***Rate or Lump Sum in Words:***	LS	1		
	BASIC ELECTRICAL REQUIREMENTS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**PANELBOARDS**				
2.2	**Computer Lab Panel Board (Rehabilitation)**				
2.2.1	Rehabilitate and install the Computer Lab Panel Board, works to include: - Rehabilitation and connection - Wires installation - Accessories - All Accessories Failed Complete to shop drawings and to the satisfaction of the engineer (ready to use) ***Rate or Lump Sum in Words:***	№			
2.3a New Item	Supply and Install New Panel Board Cover ***Rate or Lump Sum in Words:***	№			
	PANELBOARDS **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**GENERAL LIGHTING INSTALLATIONS**				
3.1	**Lighting Fixtures** 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 φ ≥ 0.9 ***Rate or Lump Sum in Words:***	№			
3.1.2	Replace existing lighting fixtures with C1 ***Rate or Lump Sum in Words:***	№			
3.1.3	TYPE C2: as same as TYPE C1 but Pendent mounted ***Rate or Lump Sum in Words:***	№			
3.1.4	TYPE A2 / A3: 600x600 mm LED Panel 3600lm, 33W, 4000K, 80CRI surface-mount/recessed, die-cast aluminum, IP20 ***Rate or Lump Sum in Words:***	№			
3.1.5	TYPE A1: as same as TYPE A2 but Pendent mounted ***Rate or Lump Sum in Words:***	№			
3.1.6	TYPE N4 / N3: LED - 900lm - 12.5W - 3000K - 80CRI - WW Surface mounted / Recessed Downlight Round - 120 deg ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3.1.7	TYPE F: PLAFONIERA OVAL Wall mounted - IP54 Aluminum die-cast housing IK 06 - CLASS I Lamp SHOULD BE LED 900Lm, 4000K, 17W. ***Rate or Lump Sum in Words:***	№			
3.1.8	TYPE W: A++ / COB LED 3000K 230V CRI 90 - 3955lm - 42W IP65 - IK07 - Die-cast EN AB-47100 aluminum housing with high corrosion resistance. ***Rate or Lump Sum in Words:***	№			
3.1.9	TYPE L (LED): OVAL 18W 516Lm IP54 IK06 FOR LIFT & TECHNICAL SHAFTS. Wall mounted luminaire Aluminum die cast housing in EN AB-47100 (low copper content) with high resistance against corrosion. IK 06 Sand blasted glass diffuser. Lamp fixed position. LOR 43% Isolation: CLASS I. Black (cod.09). Lamp not included. ***Rate or Lump Sum in Words:***	№			
3.1.10	Replace Existing lighting fixtures with TYPE L (LED) ***Rate or Lump Sum in Words:***	№			
3.1.11	TYPE M: LED - 1500lm - 17W - 4000K - 80CRI - Ceiling mounted - With Motion Sensor. ***Rate or Lump Sum in Words:***	№			
3.1.12	Replace Existing lighting fixtures with TYPE M ***Rate or Lump Sum in Words:***	№			
3.1.13	TYPE EM: Ceiling Emergency Ceiling mounted non-maintained 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65. ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3.1.14	Replace Existing EM with LED Emergency ***Rate or Lump Sum in Words:***	№			
3.1.15	TYPE EM: Wall Emergency Wall mounted non-maintained, 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65. ***Rate or Lump Sum in Words:***	№			
3.1.16	TYPE EX: Exit sign LED light wall/ceiling mounted maintained, 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65 with engraved letters on fixtures ***Rate or Lump Sum in Words:***	№			
3.1.17	Replace Existing Exit with LED Exits ***Rate or Lump Sum in Words:***	№			
3.1.18	TYPE H: High Bay LED Lightning fixture pendent 100W, 220V, 50Hz. ***Rate or Lump Sum in Words:***	№			
	GENERAL LIGHTING INSTALLATIONS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
4	**FIRE ALARM SYSTEM**				
	FIRE ALARM SYSTEM TOTAL CARRIED TO COLLECTION				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**DATA SYSTEM**				
	DATA SYSTEM **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
6	**UNINTERRUPTIBLE POWER SUPPLY (UPS)**				
	UNINTERRUPTIBLE POWER SUPPLY (UPS) TOTAL CARRIED TO COLLECTION				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
7	**CCTV SYSTEM** Supply, install, connect and test CCTV system complete with conduits installations from the location of the NVR through the different CCTV camera outlets, including the pull or draw boxes and derivation boxes, the junction and outlet boxes, 19" Rack, and all necessary connections to the management station as shown on drawings as per Tender Specifications and the like to the satisfaction of the supervision engineer.				
7.3a New Item	Replace existing Cameras by new one Similar to existing ***Rate or Lump Sum in Words:***	№			
	CCTV SYSTEM **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8	**SOLAR SYSTEM**				
8.1	Supply, install, connect and test the solar lighting system for all Electrical Loads (excluding Lifts, Pumps and AC Units) in perfect operating conditions, including but not limited to: - Photovoltaic multi-crystalline solar panels as shown on the drawings. - Hybrid Inverter - All cables, wires, conduits and all necessary accessories - Aluminum PV mountings - The Contractor shall ensure complete solar system which should function as the main Power Supply - The Contractor should submit detailed shop drawings and materials for approval. - For all blocks of the schools - Lithium Batteries for (Off-Grid Solar Types) - All necessary elevated structures on roof and other areas which are needed to install the required solar panel as mentioned on drawings (Sheds, Parking, etc.) areas ***Rate or Lump Sum in Words:***	LS			
8.1.2a	Replace Unfuctional Battery by new one similar to existing				
8.1.2.1a	Deye BOS-G 51.2 kWh High-Voltage $LiFePO_4$ Battery Energy Storage System – Complete Supply, Installation, Testing & Commissioning ***Rate or Lump Sum in Words:***	№			
8.1.2.1b	Deye BOS-GM5.1 HV $LiFePO_4$ Battery, 51.2 V, 100 Ah, 5.12 kWh, including installation, testing and commissioning ***Rate or Lump Sum in Words:***	№			
8.1.2.1c	Acid Battery, 12 V, 250 Ah ***Rate or Lump Sum in Words:***	№			
	SOLAR SYSTEM **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9	**BELL SYSTEM**				
	BELL SYSTEM **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10	**LIFTS REHABILITATION**				
10.1	Rehabilitation of the 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: 650kg Speed: 1.5mps Entrance size/ type: 1100 mm wide single speed center opening ***Rate or Lump Sum in Words:***	№			
	LIFTS REHABILITATION **TOTAL CARRIED TO COLLECTION**				

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General Summary
1038-Majdal Balhis Intermediate Public School



General Summary

Description	Amount (US $)
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Bill № 2: Civil and Architectural Works



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**SITE PREPARATION AND DEMOLITION**				
1.1	**Demolishing and Removal of Debris**				
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. ***Rate or Lump Sum in Words:***	LS	1		
1.1a New Item	**Dismantling** The works include the dismantling works related to the newly installed water tanks and prefabricated units. - The contractor shall deliver the dismantled items to the Building administration / MEHE. ***Rate or Lump Sum in Words:***				
1.1.1.a New Item	Water Tanks ***Rate or Lump Sum in Words:***	№	3		
1.1.1.b New Item	Prefabricated Units ***Rate or Lump Sum in Words:***	№	1		
1.1.1.c New Item	Partitions of any type ***Rate or Lump Sum in Words:***	m2	50		
	SITE PREPARATION AND DEMOLITION **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**EXTERNAL WORKS**				
2.4 2.4.2	**School Fences with Related Gates** Rehabilitate Existing Fence (Strengthening & Rehabilitation) Work to include - Rehabilitate and support all the existing fence as per drawings - Determine the places that requires support - Preparation of shop drawings - Replace all broken elements - Redo all damaged elements and to be similar to existing elements - Finishing works as existing (plastering, paints, stone cladding, etc.) - Rehabilitate existing steel protection (Replace all damaged part by new similar to existing and paint with epoxy as specified) - Replace existing chain link by new one (Galvanized) - Reconstruct the broken and damaged parts and rehabilitate as it was with all similar materials including steel parts with related epoxy paint as per the engineer instructions ***Rate or Lump Sum in Words:***	m			
2.5 2.5.1	**Ramp for External Existing Sidewalk** 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 ***Rate or Lump Sum in Words:***	LS			
	EXTERNAL WORKS **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**CONCRETE** **Not Applicable**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
4	**MASONRY**				
	SITE PREPARATION AND DEMOLITION **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**METAL WORKS**				
5.1	**Provide New Steel Work (Door & Windows)**				
5.1.3	Provide new double glazed aluminum windows with new burglar proof protection ***Rate or Lump Sum in Words:***	№			
5.2	**Rehabilitate and Maintain the Existing Steel Work (Burglar Proof Protection + Opening)** 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 ***Rate or Lump Sum in Words:***	№			
5.2.7b New Item	Rehabilitate existing steel doors work to include all door accessories such as lock, handle and all necessary accessories. ***Rate or Lump Sum in Words:***	№			
5.5a New Item	**Steel Handrail** - Provide new metal handrail similar to exist with all all necessary accessories - Apply one layer of epoxy base paint - Apply putty - Apply epoxy paint as per specification All needed items as per the Engineer instructions				
5.5.1a New Item	Above Parapet ***Rate or Lump Sum in Words:***	m			
	METAL WORKS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
6	**WOOD AND PLASTICS**				
6.1	**Joinery Works**				
6.1.1	**Rehabilitate Existing Kitchen Cupboards** 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 ***Rate or Lump Sum in Words:***	m			
6.1.2	**Rehabilitate Timber Cupboard** Rehabilitate timber cupboards with plastic laminate color, work to include sub framing, drawer units, shelves, fixing and fastening hardware, heavy duty ironmongery, accessories, including finish, soft close, painting and all other related auxiliaries works as required by engineer - 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. - (No patching is allowed for existing wooden works) ***Rate or Lump Sum in Words:***	m^2			
	WOOD AND PLASTICS **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
7	**THERMAL AND MOISTURE PROTECTION**				
7.0	**Preliminaries**				
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 ***Rate or Lump Sum in Words:***	LS			
7.1 7.1.1	**Roof Waterproofing** 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 & debris - 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/m³ where required - Provide Geotextile layers - Provide all aluminum flashing with mastic - Provide finishing material as required - All as specified and approved shop drawings ***Rate or Lump Sum in Words:***	m²			
	THERMAL AND MOISTURE PROTECTION **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8	**DOOR AND WINDOWS**				
8.1	**Wooden Doors and Windows** 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	**Timber Doors** 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				
8.1.1.2	Provide new single leaf wooden door with view frame ***Rate or Lump Sum in Words:***	№			
8.1.1.5	Provide new toilet doors with related accessories as per specifications ***Rate or Lump Sum in Words:***	№			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.1.3	**Rehabilitate the Existing Timber Doors** 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.				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.1.3.1.1	Rehabilitate and paint existing single leaf timber doors with related accessories ***Rate or Lump Sum in Words:***	№	24		
8.1.3.1.5a New Item	Supply and install wooden doors accessories (Handle - Lock - Etc…) ***Rate or Lump Sum in Words:***	№			
8.1.3.1.6a New Item	Replace broken glass of the wooden door view access window ***Rate or Lump Sum in Words:***	№			



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.2	**Aluminum Doors and Windows** 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	**New Aluminum Panels (Double Glass)** Supply and install the fabricated aluminum panels with double glass (6 - 12 - 6 mm) (Outer Glass should be Tempered)				
8.2.1.1	Provide new aluminum double glazed window & door panel ***Rate or Lump Sum in Words:***	№			
8.2.1.4	Replace existing elements by new single glazed aluminum windows (6mm) if the quantity of broken glass does not exceed 30% of whole building ***Rate or Lump Sum in Words:***	№			
8.2.2	**New Aluminum Internal Door** 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. ***Rate or Lump Sum in Words:***	№			
8.2.2.2	Provide new single glazed aluminum partition double leaf door ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
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 ***Rate or Lump Sum in Words:***	№			
8.2.3.1a New Item	Rehabilitate existing Doors ***Rate or Lump Sum in Words:***	№			
8.2.3.2a New Item	Rehabilitate existing aluminum Doors / Windows with all related accessories without Glass ***Rate or Lump Sum in Words:***	№	30		
	DOOR AND WINDOWS **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9	**FINISHES**				
9.1	**Cement Plaster** 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 9.1.1.1	**Internal and External Plaster Works** 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. ***Rate or Lump Sum in Words:***	m^2			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.1.2	**Repair of Existing Plaster (Internal - External) (Cracks, etc.)**				
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. Fill 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			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2	**Tiling Works (Similar to existing)** 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				
9.2.2 9.2.2.1	**New Glazed Colored Ceramic for Walls** Supply and install glazed colored ceramic for walls Include Ceramic Corner (first choice) ***Rate or Lump Sum in Words:***	m²			
9.2.4 9.2.4.1	**Repair existing broken floor tiles and skirting (all types) and reinstall by new, similar to existing for all rooms and corridors** 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. ***Rate or Lump Sum in Words:***	LS			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2.4a New Item	**<u>Repair existing broken tiles (all types) and reinstall by new, similar to existing for toilets, drinking Basin and kitchen</u>**				
9.2.4.1a New Item	Rehabilitate and repair all damaged and broken tiles, 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. ***Rate or Lump Sum in Words:***	m²	60		
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				
9.2.7.2	Type 2: Ceramic ***Rate or Lump Sum in Words:***	m²			
9.2.7.3	Type 3: Mosaic ***Rate or Lump Sum in Words:***	m²	200		
9.2.7.5	Type 5: Skirting (any type and size) ***Rate or Lump Sum in Words:***	m	50		
9.2.7.8a New Item	Type 8: Terrazzo ***Rate or Lump Sum in Words:***	m²			
9.2.7.10a New Item	Type 10: Dismantling of the existing Faux parquet, Rehabilitate, Clean and Rub the Existing any type of flooring tiles and skirting ***Rate or Lump Sum in Words:***	m²	60		

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2.8	**<u>Clean the Existing Decorative Wall Tiles</u>** Rehabilitate any type of decorative wall tiles (mosaic - marble - etc.) Work to include: - All materials and labors - Grouting - Polish and rubbing - All needed items as per the Engineer instruction. - Works to be executed by experts				
9.2.8.4	Type 4: Terrazzo ***Rate or Lump Sum in Words:***	m²			
9.2.9	**<u>Colored PVC for Covered Indoor KG Playgrounds</u>** Supply and install first class safe and antibacterial colored P.V.C. flooring for indoor KG playgrounds at least 6mm thick (Design shape and colors of vinyl flooring should be approved by engineer prior to installation) Work to include: - Shop drawing for design, shape and colors of vinyl flooring should be submitted for each classroom separately for engineer approval - Laminate existing finish flooring after removing vinyl by special concrete material level - Make good and smooth the flooring - Apply self leveling special materials(if needed) to assume Vinyl best finishing - Remove all the existing skirting - Treat the place of the existing skirting - Place the special glue as specified - Place the flooring and screw the skirting P.V.C. profile Labors and materials, screw, etc. All needed items as per the Engineer instructions and approval. <u>Note</u>: Work should be executed by experts and should be executed in presence and approval of supervision engineer and as per required specifications for materials and executions. ***Rate or Lump Sum in Words:***	m²			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.3	**Suspended Ceilings (Similar to existing)** 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 specifications - 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	**Metal Sheet Strips Suspended Ceilings:**				
9.3.1.2	60 x 60 cm Aluminum Suspended Ceiling ***Rate or Lump Sum in Words:***	m²			
9.4	**Gypsum Works (Similar to existing)**				
9.4.2	**Rehabilitate Existing Gypsum Suspended Ceiling (Tiles, Panels)**				
9.4.2.1	Rehabilitate existing gypsum board suspended ceiling n the case of damage or during construction. Works to include material, labor, equipment, etc. and to the engineer's approval ***Rate or Lump Sum in Words:***	m²			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.5	**Painting**				
9.5.1	**Wall and Ceilings Paint Works** 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, ***All paint types must be lead-free and Low VOC (Volatile Organic Compounds)***				
9.5.1.1	Super Rubber Paint for new walls and ceilings ***Rate or Lump Sum in Words:***	m²			
9.5.1.2	Super Rubber Paint for old walls and ceilings ***Rate or Lump Sum in Words:***	m²	500		
9.5.1.3	Oil Paint for new walls and ceilings ***Rate or Lump Sum in Words:***	m²			
9.5.1.4	Oil Paints for old walls and ceilings ***Rate or Lump Sum in Words:***	m²	800		

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
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. ***Rate or Lump Sum in Words:***	m²			
9.5.6	**<u>Epoxy coating (Playground -covered indoor Car Parking)</u>**				
9.5.6.5a New Item	For Roof ***Rate or Lump Sum in Words:***	m²			
	FINISHES **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10	**SPECIALTIES**				
10.1	**Bathrooms Accessories** - 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				
10.1.1 10.1.1.1	**Paper Roller Holder** Supply and install paper holder no rust, no stain stainless steel 316 with all accessories and fixation (anti-rust materials) for good quality and at the places shown on drawings All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	№			
10.1.2 10.1.2.1	**Soap Dispenser** Supply and install stainless steel 316 no rust, no stain, soap dispenser wall type fixation (anti-rust materials and accessories) with all needed items All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	№			
10.1.3 10.1.3.1	**Paper Holder Box** Supply and install paper holder box from stainless steel 316 no rust, no stain, with all needed works and fixation (anti-rust materials and accessories) The box should be from a good manufacturer All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	№			
10.1.4	**Mirror for Lavatories** 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 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) ***Rate or Lump Sum in Words:***	№	5		

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10.1.5	**<u>Handicapped Bathroom Accessories</u>** - Remove and cart away old damaged fixtures Supply and install all needed bars for the handicapped toilet of stainless steel 316 Work to include: - Materials - Labors - and all needed items as per the Engineer instructions				
10.1.5.1	Supply and install vertical grab rail 60cm bars ***Rate or Lump Sum in Words:***	№			
10.1.5.2	Supply and install Horizontal grab rail 60cm bars ***Rate or Lump Sum in Words:***	№			
10.1.5.3	Supply and install Drop Down Rail removable arm 80cm ***Rate or Lump Sum in Words:***	№			
10.1.5.4	Alarm pull cord for emergency ***Rate or Lump Sum in Words:***	№			
10.1.5.5a New Item	Supply and install partition between urinals similar to existing with all needed fixation accessories ***Rate or Lump Sum in Words:***	№			
10.2	**Classroom Specialties**				
10.2.1 10.2.1.1	**<u>White Teaching Boards</u>** Supply and install White teaching boards from approved manufacturer as per specifications of Ministry of Education and Higher Education and corresponding to the site Cost to include: - (3600mm x 1200mm) final dimensions as per site limitation - Materials and labors - Felt marker pens and eraser (12 marker pens + 2 erases for each white board) - Stainless Steel screws - Remove the existing board - All needed works as per the Engineer instructions ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10.3	**Resin Work**				
10.3.1	**Drinking Basin** 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) ***Rate or Lump Sum in Words:***	№			
10.3.1.7a New Item	Rehabilitation of existing Drinking Basin - Any Length (Traps, Taps, Cleaning and repair of any damaged elements) ***Rate or Lump Sum in Words:***	№	4		
10.3.4	**Kitchen Counter** 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				
10.3.4.3	Kitchen Counter - Length (1.76 to 2.05 m) ***Rate or Lump Sum in Words:***	№			
10.5	**Internal Curtains** Supply and install internal rolling type tissue and polyester collapsible type curtain as per specifications and at the location as shown on drawings Works to include: - Materials - Labors - Heavy Duty Accessories - All needed works as per the Engineer instructions and approval				
10.5.1	On External Opening ***Rate or Lump Sum in Words:***	m²	40		
	SPECIALITIES **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
11	**EQUIPMENT**				
	EQUIPMENT **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
12	**FURNISHINGS**				
12.1	**INSTITUTIONAL FURNITURE** Supply and install the following institutional furniture complete including all necessary fixing and accessories, all as specified, shown on the drawings and to the satisfaction of the Engineer.				
12.1.1	**Classrooms Furniture**				
12.1.1.1	Standard desk with chair for classroom, single seat. ***Rate or Lump Sum in Words:***	№			
12.1.2	**Conference Room Furniture**				
12.1.2.1	Standard table. ***Rate or Lump Sum in Words:***	№			
12.1.2.2	Standard chairs. ***Rate or Lump Sum in Words:***	№			
12.1.6 12.1.6.1	**Hooks with Rails for Hats and Coats** Hooks with rails for hats and coats, rail size 120mm high x 20mm thick, softwood, treated and painted, countersunk screwed to wall & painted steel hooks every 200 mm (5№ hooks per linear meter of rail). ***Rate or Lump Sum in Words:***	lm			
	FURNISHINGS **TOTAL CARRIED TO COLLECTION**				

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Bill № 3: Mechanical Engineering Services



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**GENERAL TECHNICAL REQUIREMENTS**				
1.1	**General Mechanical Requirements**				
1.1.1	Revise all Mechanical drawings and make sure that they can be executed properly. ***Rate or Lump Sum in Words:***	Item			
1.2	**Rehabilitation Works General Requirements** 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, floor drains, roof drains, manholes, pumps, WC tanks, adding where applicable all necessary valves, flush valves, etc., and all other necessary works. ***Rate or Lump Sum in Words:***	Item	1		
1.2.2	Maintenance and rehabilitation of existing HVAC & fire fighting systems, including all necessary piping, duct works, pumps and controls, fans, mechanical works inside shafts, air conditioning units, etc. ***Rate or Lump Sum in Words:***	Item			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1.2.3a New Item	Contractor Shall remove existing, newly added showers. Works to include - Removal of fixtures (Shower head or hand) - Replacement of damaged tiles by new one similar to existing. All other nessessary works (Finishes and mechanical works) ***Rate or Lump Sum in Words:***	№	1		
1.2.4a New Item	Contractor Shall remove existing, newly added Water Heater . Works to include - Removal of all pipes and accessories - Replacement of damaged tiles by new one similar to existing. All other nessessary works (Finishes and mechanical works) ***Rate or Lump Sum in Words:***	№	1		
	GENERAL TECHNICAL REQUIREMENTS **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION**				
2.3	**Drain Cover** Supply and install floor drain cover (P.E) 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 Engineer instructions				
2.3.1	Cover for FCO ***Rate or Lump Sum in Words:***	№			
	SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**WATER PIPE WORK INSTALLATION**				
3.2	**Electrical Water Heater** Electrical water heater as specified and scheduled; include pipe work connections, temperature and pressure gauges, control and power wiring from the MCC, hot water and pipe work connections, control and high limit control valves, isolation and safety valves, thermal insulation, valve boxes, bonding and identification, and the heater should be of a good trade mark of European or west made or first class Lebanese product.				
3.2.2	EWH-02 (100 L) ***Rate or Lump Sum in Words:***	№			
	WATER PIPE WORK INSTALLATION TOTAL CARRIED TO COLLECTION				
4	**FIRE PROTECTION**				
	FIRE PROTECTION TOTAL CARRIED TO COLLECTION				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**SANITARY FIXTURES**				
5.2	**W.C. For Non Kids** 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 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)				
5.2.1	EWC-01 (Wall Hang - 52 x 36 cm) ***Rate or Lump Sum in Words:***	№			
5.2.3a New Item	EWC Accessories (Seat Cover - Flush Tank Cover / Push Button Etc…) ***Rate or Lump Sum in Words:***	№			
5.4	**Lavatories for Non Kids** Supply and install semi pedestal wash basin similar to Ideal Standard No. 742001 or approved equal 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) ***Rate or Lump Sum in Words:***	№			
5.4.2	LAV-02 (wall hang, handicapped with mixers 56 x 41 cm) ***Rate or Lump Sum in Words:***	№			
5.4.3a	LAV accessories (Traps - Mixers - Fixation, Etc…) ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5.5	**Urinal** Supply and installation of high quality urinal units complete with proper wall fixation with anti-dust materials including drainage & water supply connection as per the approved shop drawings. Cost to include all necessary accessories, valves, sensors to provide workable system.				
5.5.1	Urinal ***Rate or Lump Sum in Words:***	№			
5.6	**Self Close Taps on Kids & Students Lavatories** Supply and install self close taps to be fixed in the lavatory body as manufactured by Grohe Item No. 36-173 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 ***Rate or Lump Sum in Words:***	№			
5.7	**Wall Type Self Close Taps on Drinking Basins** Supply and install self close taps to be fixed in the drinking basin body as manufactured by Grohe Item No. 36-176 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 ***Rate or Lump Sum in Words:***	№	10		
5.8	**Kitchen Sink Accessories** Supply and install kitchen sink accessories such as chrome trap, angle valve, mixers as specified				
5.8.1	Kitchen Sink Accessories ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5.10	**Lavatories Resin Accessories** Supply and install lavatories resin accessories such as chrome trap, angle valves as specified				
5.10.1	Lavatories Resin Accessories ***Rate or Lump Sum in Words:***	№			
5.14	**Hose Bib** Supply and install Hose Bib taps including water connection & all necessary accessories as required				
5.14.1	HB - 01 ***Rate or Lump Sum in Words:***	№			
5.14.2a New Item	Maintenace of Potable Water System Contractor shall ensure proper functionality of the system ***Rate or Lump Sum in Words:***	Item			
5.14.3a New Item	Rehabilitation of existing septic tank, including cleaning, crack and joint sealing, waterproofing, replacement of damaged fittings, and all necessary works to restore watertightness and proper operation ***Rate or Lump Sum in Words:***	Item			
	SANITARY FIXTURES **TOTAL CARRIED TO COLLECTION**				

Collection

Page №		Amount (US $)
3.1	GENERAL TECHNICAL REQUIREMENTS	.....
3.2	SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION	.....
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3.4	FIRE PROTECTION	.....
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	Total Carried to General Summary	.....

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Bill № 4: Electrical Engineering Services



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**BASIC ELECTRICAL REQUIREMENTS** 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	**Fixing and Repairing** 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 ***Rate or Lump Sum in Words:***	LS	1		
1.1.2	Wires and cables ***Rate or Lump Sum in Words:***	LS	1		
1.1.3	Sockets and switches ***Rate or Lump Sum in Words:***	LS	1		
1.1.4	Circuit breakers ***Rate or Lump Sum in Words:***	LS	1		
1.1.5	Disconnecting switches ***Rate or Lump Sum in Words:***	LS	1		
	BASIC ELECTRICAL REQUIREMENTS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**PANELBOARDS**				
2.2	**Computer Lab Panel Board (Rehabilitation)**				
2.2.1	Rehabilitate and install the Computer Lab Panel Board, works to include: - Rehabilitation and connection - Wires installation - Accessories - All Accessories Failed Complete to shop drawings and to the satisfaction of the engineer (ready to use) ***Rate or Lump Sum in Words:***	№			
2.3a New Item	Supply and Install New Panel Board Cover ***Rate or Lump Sum in Words:***	№			
	PANELBOARDS **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**GENERAL LIGHTING INSTALLATIONS**				
3.1	**Lighting Fixtures** 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 φ ≥ 0.9 ***Rate or Lump Sum in Words:***	№			
3.1.2	Replace existing lighting fixtures with C1 ***Rate or Lump Sum in Words:***	№			
3.1.3	TYPE C2: as same as TYPE C1 but Pendent mounted ***Rate or Lump Sum in Words:***	№			
3.1.4	TYPE A2 / A3: 600x600 mm LED Panel 3600lm, 33W, 4000K, 80CRI surface-mount/recessed, die-cast aluminum, IP20 ***Rate or Lump Sum in Words:***	№			
3.1.5	TYPE A1: as same as TYPE A2 but Pendent mounted ***Rate or Lump Sum in Words:***	№			
3.1.6	TYPE N4 / N3: LED - 900lm - 12.5W - 3000K - 80CRI - WW Surface mounted / Recessed Downlight Round - 120 deg ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3.1.7	TYPE F: PLAFONIERA OVAL Wall mounted - IP54 Aluminum die-cast housing IK 06 - CLASS I Lamp SHOULD BE LED 900Lm, 4000K, 17W. ***Rate or Lump Sum in Words:***	№			
3.1.8	TYPE W: A++ / COB LED 3000K 230V CRI 90 - 3955lm - 42W IP65 - IK07 - Die-cast EN AB-47100 aluminum housing with high corrosion resistance. ***Rate or Lump Sum in Words:***	№			
3.1.9	TYPE L (LED): OVAL 18W 516Lm IP54 IK06 FOR LIFT & TECHNICAL SHAFTS. Wall mounted luminaire Aluminum die cast housing in EN AB-47100 (low copper content) with high resistance against corrosion. IK 06 Sand blasted glass diffuser. Lamp fixed position. LOR 43% Isolation: CLASS I. Black (cod.09). Lamp not included. ***Rate or Lump Sum in Words:***	№			
3.1.10	Replace Existing lighting fixtures with TYPE L (LED) ***Rate or Lump Sum in Words:***	№			
3.1.11	TYPE M: LED - 1500lm - 17W - 4000K - 80CRI - Ceiling mounted - With Motion Sensor. ***Rate or Lump Sum in Words:***	№			
3.1.12	Replace Existing lighting fixtures with TYPE M ***Rate or Lump Sum in Words:***	№			
3.1.13	TYPE EM: Ceiling Emergency Ceiling mounted non-maintained 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65. ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3.1.14	Replace Existing EM with LED Emergency ***Rate or Lump Sum in Words:***	№			
3.1.15	TYPE EM: Wall Emergency Wall mounted non-maintained, 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65. ***Rate or Lump Sum in Words:***	№			
3.1.16	TYPE EX: Exit sign LED light wall/ceiling mounted maintained, 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65 with engraved letters on fixtures ***Rate or Lump Sum in Words:***	№			
3.1.17	Replace Existing Exit with LED Exits ***Rate or Lump Sum in Words:***	№			
3.1.18	TYPE H: High Bay LED Lightning fixture pendent 100W, 220V, 50Hz. ***Rate or Lump Sum in Words:***	№			
	GENERAL LIGHTING INSTALLATIONS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
4	**FIRE ALARM SYSTEM**				
	FIRE ALARM SYSTEM **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**DATA SYSTEM**				
	DATA SYSTEM **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
6	**UNINTERRUPTIBLE POWER SUPPLY (UPS)**				
	UNINTERRUPTIBLE POWER SUPPLY (UPS) TOTAL CARRIED TO COLLECTION				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
7	**CCTV SYSTEM** Supply, install, connect and test CCTV system complete with conduits installations from the location of the NVR through the different CCTV camera outlets, including the pull or draw boxes and derivation boxes, the junction and outlet boxes, 19" Rack, and all necessary connections to the management station as shown on drawings as per Tender Specifications and the like to the satisfaction of the supervision engineer.				
7.3a New Item	Replace existing Cameras by new one Similar to existing ***Rate or Lump Sum in Words:***	№			
	CCTV SYSTEM **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8	**SOLAR SYSTEM**				
8.1	Supply, install, connect and test the solar lighting system for all Electrical Loads (excluding Lifts, Pumps and AC Units) in perfect operating conditions, including but not limited to: - Photovoltaic multi-crystalline solar panels as shown on the drawings. - Hybrid Inverter - All cables, wires, conduits and all necessary accessories - Aluminum PV mountings - The Contractor shall ensure complete solar system which should function as the main Power Supply - The Contractor should submit detailed shop drawings and materials for approval. - For all blocks of the schools - Lithium Batteries for (Off-Grid Solar Types) - All necessary elevated structures on roof and other areas which are needed to install the required solar panel as mentioned on drawings (Sheds, Parking, etc.) areas ***Rate or Lump Sum in Words:***	LS			
8.1.2a	Replace Unfuctional Battery by new one similar to existing				
8.1.2.1a	Deye BOS-G 51.2 kWh High-Voltage $LiFePO_4$ Battery Energy Storage System – Complete Supply, Installation, Testing & Commissioning ***Rate or Lump Sum in Words:***	№			
8.1.2.1b	Deye BOS-GM5.1 HV $LiFePO_4$ Battery, 51.2 V, 100 Ah, 5.12 kWh, including installation, testing and commissioning ***Rate or Lump Sum in Words:***	№			
8.1.2.1c	Acid Battery, 12 V, 250 Ah ***Rate or Lump Sum in Words:***	№			
	SOLAR SYSTEM **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9	**BELL SYSTEM**				
	BELL SYSTEM **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10	**LIFTS REHABILITATION**				
10.1	Rehabilitation of the 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: 650kg Speed: 1.5mps Entrance size/ type: 1100 mm wide single speed center opening ***Rate or Lump Sum in Words:***	№			
	LIFTS REHABILITATION **TOTAL CARRIED TO COLLECTION**				

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Collection

Page №		Amount (US $)
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4.2	PANELBOARDS	.....
4.3	GENERAL LIGHTING INSTALLATIONS	.....
4.4	FIRE ALARM SYSTEM	.....
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General Summary
1041-Jebfarah and Izz El Arab Public School



General Summary

Description	Amount (US $)
Bill № 2: Civil and Architectural Works ……	
Bill № 3: Mechanical Engineering Services ……	
Bill № 4: 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:

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Description

Bill № 2: Civil and Architectural Works

Bill № 3: Mechanical Engineering Services

Bill № 4: Electrical Engineering Services

General Summary

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Bill № 2: Civil and Architectural Works



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**SITE PREPARATION AND DEMOLITION**				
1.1	**Demolishing and Removal of Debris**				
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. ***Rate or Lump Sum in Words:***	LS	1		
1.1a New Item	**Dismantling** The works include the dismantling works related to the newly installed water tanks and prefabricated units. - The contractor shall deliver the dismantled items to the Building administration / MEHE. ***Rate or Lump Sum in Words:***				
1.1.1.a New Item	Water Tanks ***Rate or Lump Sum in Words:***	№	2		
1.1.1.b New Item	Prefabricated Units ***Rate or Lump Sum in Words:***	№	1		
1.1.1.c New Item	Partitions of any type ***Rate or Lump Sum in Words:***	m2	90		
	SITE PREPARATION AND DEMOLITION **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**EXTERNAL WORKS**				
2.4 2.4.2	**School Fences with Related Gates** Rehabilitate Existing Fence (Strengthening & Rehabilitation) Work to include - Rehabilitate and support all the existing fence as per drawings - Determine the places that requires support - Preparation of shop drawings - Replace all broken elements - Redo all damaged elements and to be similar to existing elements - Finishing works as existing (plastering, paints, stone cladding, etc.) - Rehabilitate existing steel protection (Replace all damaged part by new similar to existing and paint with epoxy as specified) - Replace existing chain link by new one (Galvanized) - Reconstruct the broken and damaged parts and rehabilitate as it was with all similar materials including steel parts with related epoxy paint as per the engineer instructions ***Rate or Lump Sum in Words:***	m			
2.5 2.5.1	**Ramp for External Existing Sidewalk** 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 ***Rate or Lump Sum in Words:***	LS			
	EXTERNAL WORKS **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**CONCRETE** **Not Applicable**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
4	**MASONRY**				
	SITE PREPARATION AND DEMOLITION **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**METAL WORKS**				
5.1	**Provide New Steel Work (Door & Windows)**				
5.1.3	Provide new double glazed aluminum windows with new burglar proof protection ***Rate or Lump Sum in Words:***	№			
5.2	**Rehabilitate and Maintain the Existing Steel Work (Burglar Proof Protection + Opening)** 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 ***Rate or Lump Sum in Words:***	№	4		
5.2.7b New Item	Rehabilitate existing steel doors work to include all door accessories such as lock, handle and all necessary accessories. ***Rate or Lump Sum in Words:***	№			
5.5a New Item	**Steel Handrail** - Provide new metal handrail similar to exist with all all necessary accessories - Apply one layer of epoxy base paint - Apply putty - Apply epoxy paint as per specification All needed items as per the Engineer instructions				
5.5.1a New Item	Above Parapet ***Rate or Lump Sum in Words:***	m			
	METAL WORKS **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
6	**WOOD AND PLASTICS**				
6.1	**Joinery Works**				
6.1.1	**Rehabilitate Existing Kitchen Cupboards** 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 ***Rate or Lump Sum in Words:***	m			
6.1.2	**Rehabilitate Timber Cupboard** Rehabilitate timber cupboards with plastic laminate color, work to include sub framing, drawer units, shelves, fixing and fastening hardware, heavy duty ironmongery, accessories, including finish, soft close, painting and all other related auxiliaries works as required by engineer - 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. - (No patching is allowed for existing wooden works) ***Rate or Lump Sum in Words:***	m^2			
	WOOD AND PLASTICS **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
7	**THERMAL AND MOISTURE PROTECTION**				
7.0	**Preliminaries**				
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 ***Rate or Lump Sum in Words:***	LS			
7.1 7.1.1	**Roof Waterproofing** 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 & debris - 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/m³ where required - Provide Geotextile layers - Provide all aluminum flashing with mastic - Provide finishing material as required - All as specified and approved shop drawings ***Rate or Lump Sum in Words:***	m²			
	THERMAL AND MOISTURE PROTECTION **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8	**DOOR AND WINDOWS**				
8.1	**Wooden Doors and Windows** 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	**Timber Doors** 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				
8.1.1.2	Provide new single leaf wooden door with view frame ***Rate or Lump Sum in Words:***	№			
8.1.1.5	Provide new toilet doors with related accessories as per specifications ***Rate or Lump Sum in Words:***	№			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.1.3	**Rehabilitate the Existing Timber Doors** 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.				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.1.3.1.1	Rehabilitate and paint existing single leaf timber doors with related accessories ***Rate or Lump Sum in Words:***	№	15		
8.1.3.1.5a New Item	Supply and install wooden doors accessories (Handle - Lock - Etc…) ***Rate or Lump Sum in Words:***	№			
8.1.3.1.6a New Item	Replace broken glass of the wooden door view access window ***Rate or Lump Sum in Words:***	№			



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.2	**Aluminum Doors and Windows** 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	**New Aluminum Panels (Double Glass)** Supply and install the fabricated aluminum panels with double glass (6 - 12 - 6 mm) (Outer Glass should be Tempered)				
8.2.1.1	Provide new aluminum double glazed window & door panel ***Rate or Lump Sum in Words:***	№			
8.2.1.4	Replace existing elements by new single glazed aluminum windows (6mm) if the quantity of broken glass does not exceed 30% of whole building ***Rate or Lump Sum in Words:***	№			
8.2.2	**New Aluminum Internal Door** 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. ***Rate or Lump Sum in Words:***	№			
8.2.2.2	Provide new single glazed aluminum partition double leaf door ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
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 ***Rate or Lump Sum in Words:***	№	15		
8.2.3.1a New Item	Rehabilitate existing Doors ***Rate or Lump Sum in Words:***	№			
8.2.3.2a New Item	Rehabilitate existing aluminum Doors / Windows with all related accessories without Glass ***Rate or Lump Sum in Words:***	№			
	DOOR AND WINDOWS **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9	**FINISHES**				
9.1	**Cement Plaster** 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 9.1.1.1	**Internal and External Plaster Works** 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. ***Rate or Lump Sum in Words:***	m^2			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.1.2	**Repair of Existing Plaster (Internal - External) (Cracks, etc.)**				
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. Fill 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			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2	**Tiling Works (Similar to existing)** 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				
9.2.2 9.2.2.1	**New Glazed Colored Ceramic for Walls** Supply and install glazed colored ceramic for walls Include Ceramic Corner (first choice) ***Rate or Lump Sum in Words:***	m²			
9.2.4 9.2.4.1	**Repair existing broken floor tiles and skirting (all types) and reinstall by new, similar to existing for all rooms and corridors** 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. ***Rate or Lump Sum in Words:***	LS			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2.4a New Item	**<u>Repair existing broken tiles (all types) and reinstall by new, similar to existing for toilets, drinking Basin and kitchen</u>**				
9.2.4.1a New Item	Rehabilitate and repair all damaged and broken tiles, 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. ***Rate or Lump Sum in Words:***	m²			
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				
9.2.7.2	Type 2: Ceramic ***Rate or Lump Sum in Words:***	m²			
9.2.7.3	Type 3: Mosaic ***Rate or Lump Sum in Words:***	m²	1,000		
9.2.7.5	Type 5: Skirting (any type and size) ***Rate or Lump Sum in Words:***	m	1,350		
9.2.7.8a New Item	Type 8: Terrazzo ***Rate or Lump Sum in Words:***	m²			
9.2.7.10a New Item	Type 10: Dismantling of the existing Faux parquet, Rehabilitate, Clean and Rub the Existing any type of flooring tiles and skirting ***Rate or Lump Sum in Words:***	m²			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2.8	**<u>Clean the Existing Decorative Wall Tiles</u>** Rehabilitate any type of decorative wall tiles (mosaic - marble - etc.) Work to include: - All materials and labors - Grouting - Polish and rubbing - All needed items as per the Engineer instruction. - Works to be executed by experts				
9.2.8.4	Type 4: Terrazzo ***Rate or Lump Sum in Words:***	m²			
9.2.9	**<u>Colored PVC for Covered Indoor KG Playgrounds</u>** Supply and install first class safe and antibacterial colored P.V.C. flooring for indoor KG playgrounds at least 6mm thick (Design shape and colors of vinyl flooring should be approved by engineer prior to installation) Work to include: - Shop drawing for design, shape and colors of vinyl flooring should be submitted for each classroom separately for engineer approval - Laminate existing finish flooring after removing vinyl by special concrete material level - Make good and smooth the flooring - Apply self leveling special materials(if needed) to assume Vinyl best finishing - Remove all the existing skirting - Treat the place of the existing skirting - Place the special glue as specified - Place the flooring and screw the skirting P.V.C. profile Labors and materials, screw, etc. All needed items as per the Engineer instructions and approval. <u>Note</u>: Work should be executed by experts and should be executed in presence and approval of supervision engineer and as per required specifications for materials and executions. ***Rate or Lump Sum in Words:***	m²			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.3	**Suspended Ceilings (Similar to existing)** 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 specifications - 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	**Metal Sheet Strips Suspended Ceilings:**				
9.3.1.2	60 x 60 cm Aluminum Suspended Ceiling ***Rate or Lump Sum in Words:***	m^2			
9.4	**Gypsum Works (Similar to existing)**				
9.4.2	**Rehabilitate Existing Gypsum Suspended Ceiling (Tiles, Panels)**				
9.4.2.1	Rehabilitate existing gypsum board suspended ceiling n the case of damage or during construction. Works to include material, labor, equipment, etc. and to the engineer's approval ***Rate or Lump Sum in Words:***	m^2			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.5	**Painting**				
9.5.1	**Wall and Ceilings Paint Works** 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, ***All paint types must be lead-free and Low VOC (Volatile Organic Compounds)***				
9.5.1.1	Super Rubber Paint for new walls and ceilings ***Rate or Lump Sum in Words:***	m²			
9.5.1.2	Super Rubber Paint for old walls and ceilings ***Rate or Lump Sum in Words:***	m²	900		
9.5.1.3	Oil Paint for new walls and ceilings ***Rate or Lump Sum in Words:***	m²			
9.5.1.4	Oil Paints for old walls and ceilings ***Rate or Lump Sum in Words:***	m²	1,400		

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.5.2 9.5.2.1	**<u>Outside Walls Paint (Old and New Walls and Ceilings)</u>** 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. ***Rate or Lump Sum in Words:***	m²			
9.5.6	**<u>Epoxy coating (Playground -covered indoor Car Parking)</u>**				
9.5.6.5a New Item	For Roof ***Rate or Lump Sum in Words:***	m²			
	FINISHES **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10	**SPECIALTIES**				
10.1	**Bathrooms Accessories** - 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				
10.1.1 10.1.1.1	**Paper Roller Holder** Supply and install paper holder no rust, no stain stainless steel 316 with all accessories and fixation (anti-rust materials) for good quality and at the places shown on drawings All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	№			
10.1.2 10.1.2.1	**Soap Dispenser** Supply and install stainless steel 316 no rust, no stain, soap dispenser wall type fixation (anti-rust materials and accessories) with all needed items All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	№			
10.1.3 10.1.3.1	**Paper Holder Box** Supply and install paper holder box from stainless steel 316 no rust, no stain, with all needed works and fixation (anti-rust materials and accessories) The box should be from a good manufacturer All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	№			
10.1.4	**Mirror for Lavatories** 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 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) ***Rate or Lump Sum in Words:***	№	6		

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10.1.5	**<u>Handicapped Bathroom Accessories</u>** - Remove and cart away old damaged fixtures Supply and install all needed bars for the handicapped toilet of stainless steel 316 Work to include: - Materials - Labors - and all needed items as per the Engineer instructions				
10.1.5.1	Supply and install vertical grab rail 60cm bars ***Rate or Lump Sum in Words:***	№			
10.1.5.2	Supply and install Horizontal grab rail 60cm bars ***Rate or Lump Sum in Words:***	№			
10.1.5.3	Supply and install Drop Down Rail removable arm 80cm ***Rate or Lump Sum in Words:***	№			
10.1.5.4	Alarm pull cord for emergency ***Rate or Lump Sum in Words:***	№			
10.1.5.5a New Item	Supply and install partition between urinals similar to existing with all needed fixation accessories ***Rate or Lump Sum in Words:***	№			
10.2	**Classroom Specialties**				
10.2.1 10.2.1.1	**<u>White Teaching Boards</u>** Supply and install White teaching boards from approved manufacturer as per specifications of Ministry of Education and Higher Education and corresponding to the site Cost to include: - (3600mm x 1200mm) final dimensions as per site limitation - Materials and labors - Felt marker pens and eraser (12 marker pens + 2 erases for each white board) - Stainless Steel screws - Remove the existing board - All needed works as per the Engineer instructions ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10.3	**Resin Work**				
10.3.1	**Drinking Basin** 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) ***Rate or Lump Sum in Words:***	№			
10.3.1.7a New Item	Rehabilitation of existing Drinking Basin - Any Length (Traps, Taps, Cleaning and repair of any damaged elements) ***Rate or Lump Sum in Words:***	№			
10.3.4	**Kitchen Counter** 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				
10.3.4.3	Kitchen Counter - Length (1.76 to 2.05 m) ***Rate or Lump Sum in Words:***	№			
10.5	**Internal Curtains** Supply and install internal rolling type tissue and polyester collapsible type curtain as per specifications and at the location as shown on drawings Works to include: - Materials - Labors - Heavy Duty Accessories - All needed works as per the Engineer instructions and approval				
10.5.1	On External Opening ***Rate or Lump Sum in Words:***	m^2			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
	SPECIALTIES **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
11	**EQUIPMENT**				
	EQUIPMENT **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
12	**FURNISHINGS**				
12.1	**INSTITUTIONAL FURNITURE** Supply and install the following institutional furniture complete including all necessary fixing and accessories, all as specified, shown on the drawings and to the satisfaction of the Engineer.				
12.1.1	**Classrooms Furniture**				
12.1.1.1	Standard desk with chair for classroom, single seat. ***Rate or Lump Sum in Words:***	№			
12.1.2	**Conference Room Furniture**				
12.1.2.1	Standard table. ***Rate or Lump Sum in Words:***	№			
12.1.2.2	Standard chairs. ***Rate or Lump Sum in Words:***	№			
12.1.6 12.1.6.1	**Hooks with Rails for Hats and Coats** Hooks with rails for hats and coats, rail size 120mm high x 20mm thick, softwood, treated and painted, countersunk screwed to wall & painted steel hooks every 200 mm (5№ hooks per linear meter of rail). ***Rate or Lump Sum in Words:***	lm			
	FURNISHINGS **TOTAL CARRIED TO COLLECTION**				

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Page №		Amount (US $)
2.1	SITE PREPARATION AND DEMOLITION	.....
2.2	EXTERNAL WORKS	.....
2.3	CONCRETE	.....
2.4	MASONRY	.....
2.5	METAL WORKS	.....
2.6	WOOD AND PLASTICS	.....
2.7	THERMAL AND MOISTURE PROTECTION	.....
2.8	DOOR AND WINDOWS	.....
2.9	FINISHES	.....
2.10	SPECIALTIES	.....
2.11	EQUIPMENT	.....
2.12	FURNISHINGS	.....
	Total Carried to General Summary	.....

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Bill № 3: Mechanical Engineering Services



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**GENERAL TECHNICAL REQUIREMENTS**				
1.1	**General Mechanical Requirements**				
1.1.1	Revise all Mechanical drawings and make sure that they can be executed properly. ***Rate or Lump Sum in Words:***	Item			
1.2	**Rehabilitation Works General Requirements** 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, floor drains, roof drains, manholes, pumps, WC tanks, adding where applicable all necessary valves, flush valves, etc., and all other necessary works. ***Rate or Lump Sum in Words:***	Item	1		
1.2.2	Maintenance and rehabilitation of existing HVAC & fire fighting systems, including all necessary piping, duct works, pumps and controls, fans, mechanical works inside shafts, air conditioning units, etc. ***Rate or Lump Sum in Words:***	Item			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1.2.3a New Item	Contractor Shall remove existing, newly added showers. Works to include - Removal of fixtures (Shower head or hand) - Replacement of damaged tiles by new one similar to existing. All other nessessary works (Finishes and mechanical works) ***Rate or Lump Sum in Words:***	№	2		
1.2.4a New Item	Contractor Shall remove existing, newly added Water Heater . Works to include - Removal of all pipes and accessories - Replacement of damaged tiles by new one similar to existing. All other nessessary works (Finishes and mechanical works) ***Rate or Lump Sum in Words:***	№	1		
	GENERAL TECHNICAL REQUIREMENTS **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION**				
2.3	**Drain Cover** Supply and install floor drain cover (P.E) 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 Engineer instructions				
2.3.1	Cover for FCO ***Rate or Lump Sum in Words:***	№			
	SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**WATER PIPE WORK INSTALLATION**				
3.2	**Electrical Water Heater** Electrical water heater as specified and scheduled; include pipe work connections, temperature and pressure gauges, control and power wiring from the MCC, hot water and pipe work connections, control and high limit control valves, isolation and safety valves, thermal insulation, valve boxes, bonding and identification, and the heater should be of a good trade mark of European or west made or first class Lebanese product.				
3.2.2	EWH-02 (100 L) ***Rate or Lump Sum in Words:***	№			
	WATER PIPE WORK INSTALLATION **TOTAL CARRIED TO COLLECTION**				
4	**FIRE PROTECTION**				
	FIRE PROTECTION **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**SANITARY FIXTURES**				
5.2	**W.C. For Non Kids** 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 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)				
5.2.1	EWC-01 (Wall Hang - 52 x 36 cm) ***Rate or Lump Sum in Words:***	№			
5.2.3a New Item	EWC Accessories (Seat Cover - Flush Tank Cover / Push Button Etc…) ***Rate or Lump Sum in Words:***	№			
5.4	**Lavatories for Non Kids** Supply and install semi pedestal wash basin similar to Ideal Standard No. 742001 or approved equal 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) ***Rate or Lump Sum in Words:***	№			
5.4.2	LAV-02 (wall hang, handicapped with mixers 56 x 41 cm) ***Rate or Lump Sum in Words:***	№			
5.4.3a	LAV accessories (Traps - Mixers - Fixation, Etc…) ***Rate or Lump Sum in Words:***	№	7		

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5.5	**Urinal** Supply and installation of high quality urinal units complete with proper wall fixation with anti-dust materials including drainage & water supply connection as per the approved shop drawings. Cost to include all necessary accessories, valves, sensors to provide workable system.				
5.5.1	Urinal ***Rate or Lump Sum in Words:***	№			
5.6	**Self Close Taps on Kids & Students Lavatories** Supply and install self close taps to be fixed in the lavatory body as manufactured by Grohe Item No. 36-173 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 ***Rate or Lump Sum in Words:***	№			
5.7	**Wall Type Self Close Taps on Drinking Basins** Supply and install self close taps to be fixed in the drinking basin body as manufactured by Grohe Item No. 36-176 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 ***Rate or Lump Sum in Words:***	№	5		
5.8	**Kitchen Sink Accessories** Supply and install kitchen sink accessories such as chrome trap, angle valve, mixers as specified				
5.8.1	Kitchen Sink Accessories ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5.10	**Lavatories Resin Accessories** Supply and install lavatories resin accessories such as chrome trap, angle valves as specified				
5.10.1	Lavatories Resin Accessories ***Rate or Lump Sum in Words:***	№			
5.14	**Hose Bib** Supply and install Hose Bib taps including water connection & all necessary accessories as required				
5.14.1	HB - 01 ***Rate or Lump Sum in Words:***	№	7		
5.14.2a New Item	Maintenace of Potable Water System Contractor shall ensure proper functionality of the system ***Rate or Lump Sum in Words:***	Item			
5.14.3a New Item	Rehabilitation of existing septic tank, including cleaning, crack and joint sealing, waterproofing, replacement of damaged fittings, and all necessary works to restore watertightness and proper operation ***Rate or Lump Sum in Words:***	Item			
	SANITARY FIXTURES **TOTAL CARRIED TO COLLECTION**				

Collection

Page №		Amount (US $)
3.1	GENERAL TECHNICAL REQUIREMENTS	.....
3.2	SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION	.....
3.3	WATER PIPE WORK INSTALLATION	.....
3.4	FIRE PROTECTION	.....
3.5	SANITARY FIXTURES	.....
	Total Carried to General Summary	.....

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Bill № 4: Electrical Engineering Services



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**BASIC ELECTRICAL REQUIREMENTS** 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	**Fixing and Repairing** 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 ***Rate or Lump Sum in Words:***	LS	1		
1.1.2	Wires and cables ***Rate or Lump Sum in Words:***	LS			
1.1.3	Sockets and switches ***Rate or Lump Sum in Words:***	LS	1		
1.1.4	Circuit breakers ***Rate or Lump Sum in Words:***	LS			
1.1.5	Disconnecting switches ***Rate or Lump Sum in Words:***	LS			
	BASIC ELECTRICAL REQUIREMENTS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**PANELBOARDS**				
2.2	**Computer Lab Panel Board (Rehabilitation)**				
2.2.1	Rehabilitate and install the Computer Lab Panel Board, works to include: - Rehabilitation and connection - Wires installation - Accessories - All Accessories Failed Complete to shop drawings and to the satisfaction of the engineer (ready to use) ***Rate or Lump Sum in Words:***	№			
2.3a New Item	Supply and Install New Panel Board Cover ***Rate or Lump Sum in Words:***	№			
	PANELBOARDS **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**GENERAL LIGHTING INSTALLATIONS**				
3.1	**Lighting Fixtures** 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 φ ≥ 0.9 ***Rate or Lump Sum in Words:***	№			
3.1.2	Replace existing lighting fixtures with C1 ***Rate or Lump Sum in Words:***	№			
3.1.3	TYPE C2: as same as TYPE C1 but Pendent mounted ***Rate or Lump Sum in Words:***	№			
3.1.4	TYPE A2 / A3: 600x600 mm LED Panel 3600lm, 33W, 4000K, 80CRI surface-mount/recessed, die-cast aluminum, IP20 ***Rate or Lump Sum in Words:***	№			
3.1.5	TYPE A1: as same as TYPE A2 but Pendent mounted ***Rate or Lump Sum in Words:***	№			
3.1.6	TYPE N4 / N3: LED - 900lm - 12.5W - 3000K - 80CRI - WW Surface mounted / Recessed Downlight Round - 120 deg ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3.1.7	TYPE F: PLAFONIERA OVAL Wall mounted - IP54 Aluminum die-cast housing IK 06 - CLASS I Lamp SHOULD BE LED 900Lm, 4000K, 17W. ***Rate or Lump Sum in Words:***	№			
3.1.8	TYPE W: A++ / COB LED 3000K 230V CRI 90 - 3955lm - 42W IP65 - IK07 - Die-cast EN AB-47100 aluminum housing with high corrosion resistance. ***Rate or Lump Sum in Words:***	№			
3.1.9	TYPE L (LED): OVAL 18W 516Lm IP54 IK06 FOR LIFT & TECHNICAL SHAFTS. Wall mounted luminaire Aluminum die cast housing in EN AB-47100 (low copper content) with high resistance against corrosion. IK 06 Sand blasted glass diffuser. Lamp fixed position. LOR 43% Isolation: CLASS I. Black (cod.09). Lamp not included. ***Rate or Lump Sum in Words:***	№			
3.1.10	Replace Existing lighting fixtures with TYPE L (LED) ***Rate or Lump Sum in Words:***	№			
3.1.11	TYPE M: LED - 1500lm - 17W - 4000K - 80CRI - Ceiling mounted - With Motion Sensor. ***Rate or Lump Sum in Words:***	№			
3.1.12	Replace Existing lighting fixtures with TYPE M ***Rate or Lump Sum in Words:***	№			
3.1.13	TYPE EM: Ceiling Emergency Ceiling mounted non-maintained 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65. ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3.1.14	Replace Existing EM with LED Emergency ***Rate or Lump Sum in Words:***	№			
3.1.15	TYPE EM: Wall Emergency Wall mounted non-maintained, 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65. ***Rate or Lump Sum in Words:***	№			
3.1.16	TYPE EX: Exit sign LED light wall/ceiling mounted maintained, 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65 with engraved letters on fixtures ***Rate or Lump Sum in Words:***	№			
3.1.17	Replace Existing Exit with LED Exits ***Rate or Lump Sum in Words:***	№			
3.1.18	TYPE H: High Bay LED Lightning fixture pendent 100W, 220V, 50Hz. ***Rate or Lump Sum in Words:***	№			
	GENERAL LIGHTING INSTALLATIONS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
4	**FIRE ALARM SYSTEM**				
	FIRE ALARM SYSTEM TOTAL CARRIED TO COLLECTION				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**DATA SYSTEM**				
	DATA SYSTEM **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
6	**UNINTERRUPTIBLE POWER SUPPLY (UPS)**				
	UNINTERRUPTIBLE POWER SUPPLY (UPS) TOTAL CARRIED TO COLLECTION				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
7	**CCTV SYSTEM** Supply, install, connect and test CCTV system complete with conduits installations from the location of the NVR through the different CCTV camera outlets, including the pull or draw boxes and derivation boxes, the junction and outlet boxes, 19" Rack, and all necessary connections to the management station as shown on drawings as per Tender Specifications and the like to the satisfaction of the supervision engineer.				
7.3a New Item	Replace existing Cameras by new one Similar to existing ***Rate or Lump Sum in Words:***	№			
	CCTV SYSTEM **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8	**SOLAR SYSTEM**				
8.1	Supply, install, connect and test the solar lighting system for all Electrical Loads (excluding Lifts, Pumps and AC Units) in perfect operating conditions, including but not limited to: - Photovoltaic multi-crystalline solar panels as shown on the drawings. - Hybrid Inverter - All cables, wires, conduits and all necessary accessories - Aluminum PV mountings - The Contractor shall ensure complete solar system which should function as the main Power Supply - The Contractor should submit detailed shop drawings and materials for approval. - For all blocks of the schools - Lithium Batteries for (Off-Grid Solar Types) - All necessary elevated structures on roof and other areas which are needed to install the required solar panel as mentioned on drawings (Sheds, Parking, etc.) areas ***Rate or Lump Sum in Words:***	LS			
8.1.2a	Replace Unfuctional Battery by new one similar to existing				
8.1.2.1a	Deye BOS-G 51.2 kWh High-Voltage $LiFePO_4$ Battery Energy Storage System – Complete Supply, Installation, Testing & Commissioning ***Rate or Lump Sum in Words:***	№			
8.1.2.1b	Deye BOS-GM5.1 HV $LiFePO_4$ Battery, 51.2 V, 100 Ah, 5.12 kWh, including installation, testing and commissioning ***Rate or Lump Sum in Words:***	№			
8.1.2.1c	Acid Battery, 12 V, 250 Ah ***Rate or Lump Sum in Words:***	№			
	SOLAR SYSTEM **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9	**BELL SYSTEM**				
	BELL SYSTEM **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10	**LIFTS REHABILITATION**				
10.1	Rehabilitation of the 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: 650kg Speed: 1.5mps Entrance size/ type: 1100 mm wide single speed center opening ***Rate or Lump Sum in Words:***	№			
	LIFTS REHABILITATION TOTAL CARRIED TO COLLECTION				

Collection

Page №		Amount (US $)
4.1	BASIC ELECTRICAL REQUIREMENTS	.....
4.2	PANELBOARDS	.....
4.3	GENERAL LIGHTING INSTALLATIONS	.....
4.4	FIRE ALARM SYSTEM	.....
4.5	DATA SYSTEM	.....
4.6	UNINTERRUPTIBLE POWER SUPPLY (UPS)	.....
4.7	CCTV SYSTEM	.....
4.8	SOLAR SYSTEM	.....
4.9	BELL SYSTEM	.....
4.10	LIFTS REHABILITATION	.....
	Total Carried to General Summary	.....

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General Summary
1352-Rafeed Secondary Public School



General Summary

Description	Amount (US $)
Bill № 2: Civil and Architectural Works ……	
Bill № 3: Mechanical Engineering Services ……	
Bill № 4: 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:

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Description

Bill № 2: Civil and Architectural Works

Bill № 3: Mechanical Engineering Services

Bill № 4: Electrical Engineering Services

General Summary

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Bill № 2: Civil and Architectural Works



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**SITE PREPARATION AND DEMOLITION**				
1.1	**Demolishing and Removal of Debris**				
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. ***Rate or Lump Sum in Words:***	LS	1		
1.1a New Item	**Dismantling** The works include the dismantling works related to the newly installed water tanks and prefabricated units. - The contractor shall deliver the dismantled items to the Building administration / MEHE. ***Rate or Lump Sum in Words:***				
1.1.1.a New Item	Water Tanks ***Rate or Lump Sum in Words:***	№			
1.1.1.b New Item	Prefabricated Units ***Rate or Lump Sum in Words:***	№			
1.1.1.c New Item	Partitions of any type ***Rate or Lump Sum in Words:***	m2			
	SITE PREPARATION AND DEMOLITION **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**EXTERNAL WORKS**				
2.4 2.4.2	**School Fences with Related Gates** Rehabilitate Existing Fence (Strengthening & Rehabilitation) Work to include - Rehabilitate and support all the existing fence as per drawings - Determine the places that requires support - Preparation of shop drawings - Replace all broken elements - Redo all damaged elements and to be similar to existing elements - Finishing works as existing (plastering, paints, stone cladding, etc.) - Rehabilitate existing steel protection (Replace all damaged part by new similar to existing and paint with epoxy as specified) - Replace existing chain link by new one (Galvanized) - Reconstruct the broken and damaged parts and rehabilitate as it was with all similar materials including steel parts with related epoxy paint as per the engineer instructions ***Rate or Lump Sum in Words:***	m			
2.5 2.5.1	**Ramp for External Existing Sidewalk** 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 ***Rate or Lump Sum in Words:***	LS	1		
	EXTERNAL WORKS **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**CONCRETE** **Not Applicable**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
4	**MASONRY**				
	SITE PREPARATION AND DEMOLITION **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**METAL WORKS**				
5.1	**Provide New Steel Work (Door & Windows)**				
5.1.3	Provide new double glazed aluminum windows with new burglar proof protection ***Rate or Lump Sum in Words:***	№			
5.2	**Rehabilitate and Maintain the Existing Steel Work (Burglar Proof Protection + Opening)** 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 ***Rate or Lump Sum in Words:***	№			
5.2.7b New Item	Rehabilitate existing steel doors work to include all door accessories such as lock, handle and all necessary accessories. ***Rate or Lump Sum in Words:***	№	3		
5.5a New Item	**Steel Handrail** - Provide new metal handrail similar to exist with all all necessary accessories - Apply one layer of epoxy base paint - Apply putty - Apply epoxy paint as per specification All needed items as per the Engineer instructions				
5.5.1a New Item	Above Parapet ***Rate or Lump Sum in Words:***	m			
	METAL WORKS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
6	**WOOD AND PLASTICS**				
6.1	**Joinery Works**				
6.1.1	**Rehabilitate Existing Kitchen Cupboards** 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 ***Rate or Lump Sum in Words:***	m			
6.1.2	**Rehabilitate Timber Cupboard** Rehabilitate timber cupboards with plastic laminate color, work to include sub framing, drawer units, shelves, fixing and fastening hardware, heavy duty ironmongery, accessories, including finish, soft close, painting and all other related auxiliaries works as required by engineer - 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. - (No patching is allowed for existing wooden works) ***Rate or Lump Sum in Words:***	m²	5		
	WOOD AND PLASTICS **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
7	**THERMAL AND MOISTURE PROTECTION**				
7.0	**Preliminaries**				
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 ***Rate or Lump Sum in Words:***	LS			
7.1 7.1.1	**Roof Waterproofing** 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 & debris - 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/m³ where required - Provide Geotextile layers - Provide all aluminum flashing with mastic - Provide finishing material as required - All as specified and approved shop drawings ***Rate or Lump Sum in Words:***	m²			
	THERMAL AND MOISTURE PROTECTION **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8	**DOOR AND WINDOWS**				
8.1	**Wooden Doors and Windows** 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	**Timber Doors** 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				
8.1.1.2	Provide new single leaf wooden door with view frame ***Rate or Lump Sum in Words:***	№			
8.1.1.5	Provide new toilet doors with related accessories as per specifications ***Rate or Lump Sum in Words:***	№			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.1.3	**Rehabilitate the Existing Timber Doors** 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.				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.1.3.1.1	Rehabilitate and paint existing single leaf timber doors with related accessories ***Rate or Lump Sum in Words:***	№			
8.1.3.1.5a New Item	Supply and install wooden doors accessories (Handle - Lock - Etc…) ***Rate or Lump Sum in Words:***	№	7		
8.1.3.1.6a New Item	Replace broken glass of the wooden door view access window ***Rate or Lump Sum in Words:***	№			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.2	**Aluminum Doors and Windows** 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	**New Aluminum Panels (Double Glass)** Supply and install the fabricated aluminum panels with double glass (6 - 12 - 6 mm) (Outer Glass should be Tempered)				
8.2.1.1	Provide new aluminum double glazed window & door panel ***Rate or Lump Sum in Words:***	№			
8.2.1.4	Replace existing elements by new single glazed aluminum windows (6mm) if the quantity of broken glass does not exceed 30% of whole building ***Rate or Lump Sum in Words:***	№			
8.2.2	**New Aluminum Internal Door** 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. ***Rate or Lump Sum in Words:***	№			
8.2.2.2	Provide new single glazed aluminum partition double leaf door ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
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 ***Rate or Lump Sum in Words:***	№			
8.2.3.1a New Item	Rehabilitate existing Doors ***Rate or Lump Sum in Words:***	№			
8.2.3.2a New Item	Rehabilitate existing aluminum Doors / Windows with all related accessories without Glass ***Rate or Lump Sum in Words:***	№			
	DOOR AND WINDOWS **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9	**FINISHES**				
9.1	**Cement Plaster** 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 9.1.1.1	**Internal and External Plaster Works** 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. ***Rate or Lump Sum in Words:***	m²	10		

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.1.2	**Repair of Existing Plaster (Internal - External) (Cracks, etc.)**				
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. Fill 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		



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2	**Tiling Works (Similar to existing)** 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				
9.2.2 9.2.2.1	**New Glazed Colored Ceramic for Walls** Supply and install glazed colored ceramic for walls Include Ceramic Corner (first choice) ***Rate or Lump Sum in Words:***	m^2			
9.2.4 9.2.4.1	**Repair existing broken floor tiles and skirting (all types) and reinstall by new, similar to existing for all rooms and corridors** 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. ***Rate or Lump Sum in Words:***	LS			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2.4a New Item	**Repair existing broken tiles (all types) and reinstall by new, similar to existing for toilets, drinking Basin and kitchen**				
9.2.4.1a New Item	Rehabilitate and repair all damaged and broken tiles, 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. ***Rate or Lump Sum in Words:***	m²			
9.2.7	**Clean and Rub the Existing Floor Tiles and Skirting** 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				
9.2.7.2	Type 2: Ceramic ***Rate or Lump Sum in Words:***	m²			
9.2.7.3	Type 3: Mosaic ***Rate or Lump Sum in Words:***	m²			
9.2.7.5	Type 5: Skirting (any type and size) ***Rate or Lump Sum in Words:***	m			
9.2.7.8a New Item	Type 8: Terrazzo ***Rate or Lump Sum in Words:***	m²			
9.2.7.10a New Item	Type 10: Dismantling of the existing Faux parquet, Rehabilitate, Clean and Rub the Existing any type of flooring tiles and skirting ***Rate or Lump Sum in Words:***	m²			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2.8	**<u>Clean the Existing Decorative Wall Tiles</u>** Rehabilitate any type of decorative wall tiles (mosaic - marble - etc.) Work to include: - All materials and labors - Grouting - Polish and rubbing - All needed items as per the Engineer instruction. - Works to be executed by experts				
9.2.8.4	Type 4: Terrazzo ***Rate or Lump Sum in Words:***	m²			
9.2.9	**<u>Colored PVC for Covered Indoor KG Playgrounds</u>** Supply and install first class safe and antibacterial colored P.V.C. flooring for indoor KG playgrounds at least 6mm thick (Design shape and colors of vinyl flooring should be approved by engineer prior to installation) Work to include: - Shop drawing for design, shape and colors of vinyl flooring should be submitted for each classroom separately for engineer approval - Laminate existing finish flooring after removing vinyl by special concrete material level - Make good and smooth the flooring - Apply self leveling special materials(if needed) to assume Vinyl best finishing - Remove all the existing skirting - Treat the place of the existing skirting - Place the special glue as specified - Place the flooring and screw the skirting P.V.C. profile Labors and materials, screw, etc. All needed items as per the Engineer instructions and approval. <u>Note</u>: Work should be executed by experts and should be executed in presence and approval of supervision engineer and as per required specifications for materials and executions. ***Rate or Lump Sum in Words:***	m²			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.3	**Suspended Ceilings (Similar to existing)** 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 specifications - 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	**Metal Sheet Strips Suspended Ceilings:**				
9.3.1.2	60 x 60 cm Aluminum Suspended Ceiling ***Rate or Lump Sum in Words:***	m^2			
9.4	**Gypsum Works (Similar to existing)**				
9.4.2	**Rehabilitate Existing Gypsum Suspended Ceiling (Tiles, Panels)**				
9.4.2.1	Rehabilitate existing gypsum board suspended ceiling n the case of damage or during construction. Works to include material, labor, equipment, etc. and to the engineer's approval ***Rate or Lump Sum in Words:***	m^2			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.5	**Painting**				
9.5.1	**Wall and Ceilings Paint Works** 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, ***All paint types must be lead-free and Low VOC (Volatile Organic Compounds)***				
9.5.1.1	Super Rubber Paint for new walls and ceilings ***Rate or Lump Sum in Words:***	m²			
9.5.1.2	Super Rubber Paint for old walls and ceilings ***Rate or Lump Sum in Words:***	m²	200		
9.5.1.3	Oil Paint for new walls and ceilings ***Rate or Lump Sum in Words:***	m²	150		
9.5.1.4	Oil Paints for old walls and ceilings ***Rate or Lump Sum in Words:***	m²			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.5.2 9.5.2.1	**Outside Walls Paint (Old and New Walls and Ceilings)** 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. ***Rate or Lump Sum in Words:***	m²	50		
9.5.6	**Epoxy coating (Playground -covered indoor Car Parking)**				
9.5.6.5a New Item	For Roof ***Rate or Lump Sum in Words:***	m²			
	FINISHES **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10	**SPECIALTIES**				
10.1	**Bathrooms Accessories** - 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				
10.1.1 10.1.1.1	**Paper Roller Holder** Supply and install paper holder no rust, no stain stainless steel 316 with all accessories and fixation (anti-rust materials) for good quality and at the places shown on drawings All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	№	8		
10.1.2 10.1.2.1	**Soap Dispenser** Supply and install stainless steel 316 no rust, no stain, soap dispenser wall type fixation (anti-rust materials and accessories) with all needed items All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	№	4		
10.1.3 10.1.3.1	**Paper Holder Box** Supply and install paper holder box from stainless steel 316 no rust, no stain, with all needed works and fixation (anti-rust materials and accessories) The box should be from a good manufacturer All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	№	4		
10.1.4	**Mirror for Lavatories** 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 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) ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10.1.5	**<u>Handicapped Bathroom Accessories</u>** - Remove and cart away old damaged fixtures Supply and install all needed bars for the handicapped toilet of stainless steel 316 Work to include: - Materials - Labors - and all needed items as per the Engineer instructions				
10.1.5.1	Supply and install vertical grab rail 60cm bars ***Rate or Lump Sum in Words:***	№			
10.1.5.2	Supply and install Horizontal grab rail 60cm bars ***Rate or Lump Sum in Words:***	№			
10.1.5.3	Supply and install Drop Down Rail removable arm 80cm ***Rate or Lump Sum in Words:***	№			
10.1.5.4	Alarm pull cord for emergency ***Rate or Lump Sum in Words:***	№			
10.1.5.5a New Item	Supply and install partition between urinals similar to existing with all needed fixation accessories ***Rate or Lump Sum in Words:***	№			
10.2	**Classroom Specialties**				
10.2.1	**<u>White Teaching Boards</u>**				
10.2.1.1	Supply and install White teaching boards from approved manufacturer as per specifications of Ministry of Education and Higher Education and corresponding to the site Cost to include: - (3600mm x 1200mm) final dimensions as per site limitation - Materials and labors - Felt marker pens and eraser (12 marker pens + 2 erases for each white board) - Stainless Steel screws - Remove the existing board - All needed works as per the Engineer instructions ***Rate or Lump Sum in Words:***	№	5		

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10.3	**Resin Work**				
10.3.1	**Drinking Basin** 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) ***Rate or Lump Sum in Words:***	№	1		
10.3.1.7a New Item	Rehabilitation of existing Drinking Basin - Any Length (Traps, Taps, Cleaning and repair of any damaged elements) ***Rate or Lump Sum in Words:***	№	1		
10.3.4	**Kitchen Counter** 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				
10.3.4.3	Kitchen Counter - Length (1.76 to 2.05 m) ***Rate or Lump Sum in Words:***	№	1		
10.5	**Internal Curtains** Supply and install internal rolling type tissue and polyester collapsible type curtain as per specifications and at the location as shown on drawings Works to include: - Materials - Labors - Heavy Duty Accessories - All needed works as per the Engineer instructions and approval				
10.5.1	On External Opening ***Rate or Lump Sum in Words:***	m²			
	SPECIALTIES **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
11	**EQUIPMENT**				
	EQUIPMENT **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
12	**FURNISHINGS**				
12.1	**INSTITUTIONAL FURNITURE** Supply and install the following institutional furniture complete including all necessary fixing and accessories, all as specified, shown on the drawings and to the satisfaction of the Engineer.				
12.1.1	**Classrooms Furniture**				
12.1.1.1	Standard desk with chair for classroom, single seat. ***Rate or Lump Sum in Words:***	№	8		
12.1.2	**Conference Room Furniture**				
12.1.2.1	Standard table. ***Rate or Lump Sum in Words:***	№	2		
12.1.2.2	Standard chairs. ***Rate or Lump Sum in Words:***	№			
12.1.6 12.1.6.1	**Hooks with Rails for Hats and Coats** Hooks with rails for hats and coats, rail size 120mm high x 20mm thick, softwood, treated and painted, countersunk screwed to wall & painted steel hooks every 200 mm (5№ hooks per linear meter of rail). ***Rate or Lump Sum in Words:***	lm			
	FURNISHINGS **TOTAL CARRIED TO COLLECTION**				

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Bill № 3: Mechanical Engineering Services



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**GENERAL TECHNICAL REQUIREMENTS**				
1.1	**General Mechanical Requirements**				
1.1.1	Revise all Mechanical drawings and make sure that they can be executed properly. ***Rate or Lump Sum in Words:***	Item			
1.2	**Rehabilitation Works General Requirements** 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, floor drains, roof drains, manholes, pumps, WC tanks, adding where applicable all necessary valves, flush valves, etc., and all other necessary works. ***Rate or Lump Sum in Words:***	Item	1		
1.2.2	Maintenance and rehabilitation of existing HVAC & fire fighting systems, including all necessary piping, duct works, pumps and controls, fans, mechanical works inside shafts, air conditioning units, etc. ***Rate or Lump Sum in Words:***	Item			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1.2.3a New Item	Contractor Shall remove existing, newly added showers. Works to include - Removal of fixtures (Shower head or hand) - Replacement of damaged tiles by new one similar to existing. All other nessessary works (Finishes and mechanical works) ***Rate or Lump Sum in Words:***	№	1		
1.2.4a New Item	Contractor Shall remove existing, newly added Water Heater . Works to include - Removal of all pipes and accessories - Replacement of damaged tiles by new one similar to existing. All other nessessary works (Finishes and mechanical works) ***Rate or Lump Sum in Words:***	№			
	GENERAL TECHNICAL REQUIREMENTS **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION**				
2.3	**Drain Cover** Supply and install floor drain cover (P.E) 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 Engineer instructions				
2.3.1	Cover for FCO ***Rate or Lump Sum in Words:***	№			
	SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**WATER PIPE WORK INSTALLATION**				
3.2	**Electrical Water Heater** Electrical water heater as specified and scheduled; include pipe work connections, temperature and pressure gauges, control and power wiring from the MCC, hot water and pipe work connections, control and high limit control valves, isolation and safety valves, thermal insulation, valve boxes, bonding and identification, and the heater should be of a good trade mark of European or west made or first class Lebanese product.				
3.2.2	EWH-02 (100 L) ***Rate or Lump Sum in Words:***	№	1		
	WATER PIPE WORK INSTALLATION TOTAL CARRIED TO COLLECTION				
4	**FIRE PROTECTION**				
	FIRE PROTECTION TOTAL CARRIED TO COLLECTION				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**SANITARY FIXTURES**				
5.2	**W.C. For Non Kids** 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 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)				
5.2.1	EWC-01 (Wall Hang - 52 x 36 cm) ***Rate or Lump Sum in Words:***	№	1		
5.2.3a New Item	EWC Accessories (Seat Cover - Flush Tank Cover / Push Button Etc…) ***Rate or Lump Sum in Words:***	№	7		
5.4	**Lavatories for Non Kids** Supply and install semi pedestal wash basin similar to Ideal Standard No. 742001 or approved equal 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) ***Rate or Lump Sum in Words:***	№			
5.4.2	LAV-02 (wall hang, handicapped with mixers 56 x 41 cm) ***Rate or Lump Sum in Words:***	№			
5.4.3a	LAV accessories (Traps - Mixers - Fixation, Etc…) ***Rate or Lump Sum in Words:***	№	2		

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5.5	**Urinal** Supply and installation of high quality urinal units complete with proper wall fixation with anti-dust materials including drainage & water supply connection as per the approved shop drawings. Cost to include all necessary accessories, valves, sensors to provide workable system.				
5.5.1	Urinal ***Rate or Lump Sum in Words:***	№			
5.6	**Self Close Taps on Kids & Students Lavatories** Supply and install self close taps to be fixed in the lavatory body as manufactured by Grohe Item No. 36-173 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 ***Rate or Lump Sum in Words:***	№			
5.7	**Wall Type Self Close Taps on Drinking Basins** Supply and install self close taps to be fixed in the drinking basin body as manufactured by Grohe Item No. 36-176 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 ***Rate or Lump Sum in Words:***	№	5		
5.8	**Kitchen Sink Accessories** Supply and install kitchen sink accessories such as chrome trap, angle valve, mixers as specified				
5.8.1	Kitchen Sink Accessories ***Rate or Lump Sum in Words:***	№	1		

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5.10	**Lavatories Resin Accessories** Supply and install lavatories resin accessories such as chrome trap, angle valves as specified				
5.10.1	Lavatories Resin Accessories ***Rate or Lump Sum in Words:***	№			
5.14	**Hose Bib** Supply and install Hose Bib taps including water connection & all necessary accessories as required				
5.14.1	HB - 01 ***Rate or Lump Sum in Words:***	№	2		
5.14.2a New Item	Maintenace of Potable Water System Contractor shall ensure proper functionality of the system ***Rate or Lump Sum in Words:***	Item			
5.14.3a New Item	Rehabilitation of existing septic tank, including cleaning, crack and joint sealing, waterproofing, replacement of damaged fittings, and all necessary works to restore watertightness and proper operation ***Rate or Lump Sum in Words:***	Item			
	SANITARY FIXTURES **TOTAL CARRIED TO COLLECTION**				

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Bill № 4: Electrical Engineering Services



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**BASIC ELECTRICAL REQUIREMENTS** 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	**Fixing and Repairing** 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 ***Rate or Lump Sum in Words:***	LS	1		
1.1.2	Wires and cables ***Rate or Lump Sum in Words:***	LS			
1.1.3	Sockets and switches ***Rate or Lump Sum in Words:***	LS	1		
1.1.4	Circuit breakers ***Rate or Lump Sum in Words:***	LS			
1.1.5	Disconnecting switches ***Rate or Lump Sum in Words:***	LS			
	BASIC ELECTRICAL REQUIREMENTS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**PANELBOARDS**				
2.2	**Computer Lab Panel Board (Rehabilitation)**				
2.2.1	Rehabilitate and install the Computer Lab Panel Board, works to include: - Rehabilitation and connection - Wires installation - Accessories - All Accessories Failed Complete to shop drawings and to the satisfaction of the engineer (ready to use) ***Rate or Lump Sum in Words:***	№			
2.3a New Item	Supply and Install New Panel Board Cover ***Rate or Lump Sum in Words:***	№	3		
	PANELBOARDS **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**GENERAL LIGHTING INSTALLATIONS**				
3.1	**Lighting Fixtures** 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 φ ≥ 0.9 ***Rate or Lump Sum in Words:***	№			
3.1.2	Replace existing lighting fixtures with C1 ***Rate or Lump Sum in Words:***	№			
3.1.3	TYPE C2: as same as TYPE C1 but Pendent mounted ***Rate or Lump Sum in Words:***	№			
3.1.4	TYPE A2 / A3: 600x600 mm LED Panel 3600lm, 33W, 4000K, 80CRI surface-mount/recessed, die-cast aluminum, IP20 ***Rate or Lump Sum in Words:***	№			
3.1.5	TYPE A1: as same as TYPE A2 but Pendent mounted ***Rate or Lump Sum in Words:***	№			
3.1.6	TYPE N4 / N3: LED - 900lm - 12.5W - 3000K - 80CRI - WW Surface mounted / Recessed Downlight Round - 120 deg ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3.1.7	TYPE F: PLAFONIERA OVAL Wall mounted - IP54 Aluminum die-cast housing IK 06 - CLASS I Lamp SHOULD BE LED 900Lm, 4000K, 17W. ***Rate or Lump Sum in Words:***	№			
3.1.8	TYPE W: A++ / COB LED 3000K 230V CRI 90 - 3955lm - 42W IP65 - IK07 - Die-cast EN AB-47100 aluminum housing with high corrosion resistance. ***Rate or Lump Sum in Words:***	№			
3.1.9	TYPE L (LED): OVAL 18W 516Lm IP54 IK06 FOR LIFT & TECHNICAL SHAFTS. Wall mounted luminaire Aluminum die cast housing in EN AB-47100 (low copper content) with high resistance against corrosion. IK 06 Sand blasted glass diffuser. Lamp fixed position. LOR 43% Isolation: CLASS I. Black (cod.09). Lamp not included. ***Rate or Lump Sum in Words:***	№			
3.1.10	Replace Existing lighting fixtures with TYPE L (LED) ***Rate or Lump Sum in Words:***	№			
3.1.11	TYPE M: LED - 1500lm - 17W - 4000K - 80CRI - Ceiling mounted - With Motion Sensor. ***Rate or Lump Sum in Words:***	№			
3.1.12	Replace Existing lighting fixtures with TYPE M ***Rate or Lump Sum in Words:***	№			
3.1.13	TYPE EM: Ceiling Emergency Ceiling mounted non-maintained 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65. ***Rate or Lump Sum in Words:***	№			



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3.1.14	Replace Existing EM with LED Emergency ***Rate or Lump Sum in Words:***	№			
3.1.15	TYPE EM: Wall Emergency Wall mounted non-maintained, 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65. ***Rate or Lump Sum in Words:***	№			
3.1.16	TYPE EX: Exit sign LED light wall/ceiling mounted maintained, 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65 with engraved letters on fixtures ***Rate or Lump Sum in Words:***	№			
3.1.17	Replace Existing Exit with LED Exits ***Rate or Lump Sum in Words:***	№			
3.1.18	TYPE H: High Bay LED Lightning fixture pendent 100W, 220V, 50Hz. ***Rate or Lump Sum in Words:***	№			
	GENERAL LIGHTING INSTALLATIONS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
4	**FIRE ALARM SYSTEM**				
	FIRE ALARM SYSTEM **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**DATA SYSTEM**				
	DATA SYSTEM **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
6	**UNINTERRUPTIBLE POWER SUPPLY (UPS)**				
	UNINTERRUPTIBLE POWER SUPPLY (UPS) TOTAL CARRIED TO COLLECTION				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
7	**CCTV SYSTEM** Supply, install, connect and test CCTV system complete with conduits installations from the location of the NVR through the different CCTV camera outlets, including the pull or draw boxes and derivation boxes, the junction and outlet boxes, 19" Rack, and all necessary connections to the management station as shown on drawings as per Tender Specifications and the like to the satisfaction of the supervision engineer.				
7.3a New Item	Replace existing Cameras by new one Similar to existing ***Rate or Lump Sum in Words:***	№			
	CCTV SYSTEM **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8	**SOLAR SYSTEM**				
8.1	Supply, install, connect and test the solar lighting system for all Electrical Loads (excluding Lifts, Pumps and AC Units) in perfect operating conditions, including but not limited to: - Photovoltaic multi-crystalline solar panels as shown on the drawings. - Hybrid Inverter - All cables, wires, conduits and all necessary accessories - Aluminum PV mountings - The Contractor shall ensure complete solar system which should function as the main Power Supply - The Contractor should submit detailed shop drawings and materials for approval. - For all blocks of the schools - Lithium Batteries for (Off-Grid Solar Types) - All necessary elevated structures on roof and other areas which are needed to install the required solar panel as mentioned on drawings (Sheds, Parking, etc.) areas ***Rate or Lump Sum in Words:***	LS			
8.1.2a	Replace Unfuctional Battery by new one similar to existing				
8.1.2.1a	Deye BOS-G 51.2 kWh High-Voltage $LiFePO_4$ Battery Energy Storage System – Complete Supply, Installation, Testing & Commissioning ***Rate or Lump Sum in Words:***	№			
8.1.2.1b	Deye BOS-GM5.1 HV $LiFePO_4$ Battery, 51.2 V, 100 Ah, 5.12 kWh, including installation, testing and commissioning ***Rate or Lump Sum in Words:***	№			
8.1.2.1c	Acid Battery, 12 V, 250 Ah ***Rate or Lump Sum in Words:***	№			
	SOLAR SYSTEM **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9	**BELL SYSTEM**				
	BELL SYSTEM **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10	**LIFTS REHABILITATION**				
10.1	Rehabilitation of the 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: 650kg Speed: 1.5mps Entrance size/ type: 1100 mm wide single speed center opening ***Rate or Lump Sum in Words:***	№			
	LIFTS REHABILITATION **TOTAL CARRIED TO COLLECTION**				

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General Summary
1421-Hay El Fadel Elementary Public School



General Summary

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Bill № 2: Civil and Architectural Works



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**SITE PREPARATION AND DEMOLITION**				
1.1	**Demolishing and Removal of Debris**				
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. ***Rate or Lump Sum in Words:***	LS	1		
1.1a New Item	**Dismantling** The works include the dismantling works related to the newly installed water tanks and prefabricated units. - The contractor shall deliver the dismantled items to the Building administration / MEHE. ***Rate or Lump Sum in Words:***				
1.1.1.a New Item	Water Tanks ***Rate or Lump Sum in Words:***	№	1		
1.1.1.b New Item	Prefabricated Units ***Rate or Lump Sum in Words:***	№	2		
1.1.1.c New Item	Partitions of any type ***Rate or Lump Sum in Words:***	m2			
	SITE PREPARATION AND DEMOLITION **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**EXTERNAL WORKS**				
2.4 2.4.2	**School Fences with Related Gates** Rehabilitate Existing Fence (Strengthening & Rehabilitation) Work to include - Rehabilitate and support all the existing fence as per drawings - Determine the places that requires support - Preparation of shop drawings - Replace all broken elements - Redo all damaged elements and to be similar to existing elements - Finishing works as existing (plastering, paints, stone cladding, etc.) - Rehabilitate existing steel protection (Replace all damaged part by new similar to existing and paint with epoxy as specified) - Replace existing chain link by new one (Galvanized) - Reconstruct the broken and damaged parts and rehabilitate as it was with all similar materials including steel parts with related epoxy paint as per the engineer instructions ***Rate or Lump Sum in Words:***	m			
2.5 2.5.1	**Ramp for External Existing Sidewalk** 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 ***Rate or Lump Sum in Words:***	LS			
	EXTERNAL WORKS **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**CONCRETE** **Not Applicable**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
4	**MASONRY**				
	SITE PREPARATION AND DEMOLITION TOTAL CARRIED TO COLLECTION				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**METAL WORKS**				
5.1	**Provide New Steel Work (Door & Windows)**				
5.1.3	Provide new double glazed aluminum windows with new burglar proof protection ***Rate or Lump Sum in Words:***	№			
5.2	**Rehabilitate and Maintain the Existing Steel Work (Burglar Proof Protection + Opening)** 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 ***Rate or Lump Sum in Words:***	№			
5.2.7b New Item	Rehabilitate existing steel doors work to include all door accessories such as lock, handle and all necessary accessories. ***Rate or Lump Sum in Words:***	№			
5.5a New Item	**Steel Handrail** - Provide new metal handrail similar to exist with all all necessary accessories - Apply one layer of epoxy base paint - Apply putty - Apply epoxy paint as per specification All needed items as per the Engineer instructions				
5.5.1a New Item	Above Parapet ***Rate or Lump Sum in Words:***	m			
	METAL WORKS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
6	**WOOD AND PLASTICS**				
6.1	**Joinery Works**				
6.1.1	**Rehabilitate Existing Kitchen Cupboards** 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 ***Rate or Lump Sum in Words:***	m			
6.1.2	**Rehabilitate Timber Cupboard** Rehabilitate timber cupboards with plastic laminate color, work to include sub framing, drawer units, shelves, fixing and fastening hardware, heavy duty ironmongery, accessories, including finish, soft close, painting and all other related auxiliaries works as required by engineer - 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. - (No patching is allowed for existing wooden works) ***Rate or Lump Sum in Words:***	m²			
	WOOD AND PLASTICS **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
7	**THERMAL AND MOISTURE PROTECTION**				
7.0	**Preliminaries**				
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 ***Rate or Lump Sum in Words:***	LS			
7.1 7.1.1	**Roof Waterproofing** 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 & debris - 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/m³ where required - Provide Geotextile layers - Provide all aluminum flashing with mastic - Provide finishing material as required - All as specified and approved shop drawings ***Rate or Lump Sum in Words:***	m²			
	THERMAL AND MOISTURE PROTECTION **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8	**DOOR AND WINDOWS**				
8.1	**Wooden Doors and Windows** 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	**Timber Doors** 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				
8.1.1.2	Provide new single leaf wooden door with view frame ***Rate or Lump Sum in Words:***	№			
8.1.1.5	Provide new toilet doors with related accessories as per specifications ***Rate or Lump Sum in Words:***	№			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.1.3	**Rehabilitate the Existing Timber Doors** 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.				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.1.3.1.1	Rehabilitate and paint existing single leaf timber doors with related accessories ***Rate or Lump Sum in Words:***	№			
8.1.3.1.5a New Item	Supply and install wooden doors accessories (Handle - Lock - Etc…) ***Rate or Lump Sum in Words:***	№	2		
8.1.3.1.6a New Item	Replace broken glass of the wooden door view access window ***Rate or Lump Sum in Words:***	№			



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
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)				
8.2.1.1	Provide new aluminum double glazed window & door panel ***Rate or Lump Sum in Words:***	№			
8.2.1.4	Replace existing elements by new single glazed aluminum windows (6mm) if the quantity of broken glass does not exceed 30% of whole building ***Rate or Lump Sum in Words:***	№			
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. ***Rate or Lump Sum in Words:***	№			
8.2.2.2	Provide new single glazed aluminum partition double leaf door ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
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 ***Rate or Lump Sum in Words:***	№	2		
8.2.3.1a New Item	Rehabilitate existing Doors ***Rate or Lump Sum in Words:***	№			
8.2.3.2a New Item	Rehabilitate existing aluminum Doors / Windows with all related accessories without Glass ***Rate or Lump Sum in Words:***	№			
	DOOR AND WINDOWS **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9	**FINISHES**				
9.1	**Cement Plaster** 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 9.1.1.1	**Internal and External Plaster Works** 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. ***Rate or Lump Sum in Words:***	m^2			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.1.2	**Repair of Existing Plaster (Internal - External) (Cracks, etc.)**				
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. Fill 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		

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2	**Tiling Works (Similar to existing)** 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				
9.2.2 9.2.2.1	**New Glazed Colored Ceramic for Walls** Supply and install glazed colored ceramic for walls Include Ceramic Corner (first choice) ***Rate or Lump Sum in Words:***	m^2			
9.2.4 9.2.4.1	**Repair existing broken floor tiles and skirting (all types) and reinstall by new, similar to existing for all rooms and corridors** 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. ***Rate or Lump Sum in Words:***	LS			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2.4a New Item	**<u>Repair existing broken tiles (all types) and reinstall by new, similar to existing for toilets, drinking Basin and kitchen</u>**				
9.2.4.1a New Item	Rehabilitate and repair all damaged and broken tiles, 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. ***Rate or Lump Sum in Words:***	m²			
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				
9.2.7.2	Type 2: Ceramic ***Rate or Lump Sum in Words:***	m²			
9.2.7.3	Type 3: Mosaic ***Rate or Lump Sum in Words:***	m²			
9.2.7.5	Type 5: Skirting (any type and size) ***Rate or Lump Sum in Words:***	m			
9.2.7.8a New Item	Type 8: Terrazzo ***Rate or Lump Sum in Words:***	m²			
9.2.7.10a New Item	Type 10: Dismantling of the existing Faux parquet, Rehabilitate, Clean and Rub the Existing any type of flooring tiles and skirting ***Rate or Lump Sum in Words:***	m²			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2.8	**<u>Clean the Existing Decorative Wall Tiles</u>** Rehabilitate any type of decorative wall tiles (mosaic - marble - etc.) Work to include: - All materials and labors - Grouting - Polish and rubbing - All needed items as per the Engineer instruction. - Works to be executed by experts				
9.2.8.4	Type 4: Terrazzo ***Rate or Lump Sum in Words:***	m²			
9.2.9	**<u>Colored PVC for Covered Indoor KG Playgrounds</u>** Supply and install first class safe and antibacterial colored P.V.C. flooring for indoor KG playgrounds at least 6mm thick (Design shape and colors of vinyl flooring should be approved by engineer prior to installation) Work to include: - Shop drawing for design, shape and colors of vinyl flooring should be submitted for each classroom separately for engineer approval - Laminate existing finish flooring after removing vinyl by special concrete material level - Make good and smooth the flooring - Apply self leveling special materials(if needed) to assume Vinyl best finishing - Remove all the existing skirting - Treat the place of the existing skirting - Place the special glue as specified - Place the flooring and screw the skirting P.V.C. profile Labors and materials, screw, etc. All needed items as per the Engineer instructions and approval. <u>Note</u>: Work should be executed by experts and should be executed in presence and approval of supervision engineer and as per required specifications for materials and executions. ***Rate or Lump Sum in Words:***	m²			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.3	**Suspended Ceilings (Similar to existing)** 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 specifications - 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	**Metal Sheet Strips Suspended Ceilings:**				
9.3.1.2	60 x 60 cm Aluminum Suspended Ceiling ***Rate or Lump Sum in Words:***	m²			
9.4	**Gypsum Works (Similar to existing)**				
9.4.2	**Rehabilitate Existing Gypsum Suspended Ceiling (Tiles, Panels)**				
9.4.2.1	Rehabilitate existing gypsum board suspended ceiling n the case of damage or during construction. Works to include material, labor, equipment, etc. and to the engineer's approval ***Rate or Lump Sum in Words:***	m²			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.5	**Painting**				
9.5.1	**Wall and Ceilings Paint Works** 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, ***All paint types must be lead-free and Low VOC (Volatile Organic Compounds)***				
9.5.1.1	Super Rubber Paint for new walls and ceilings ***Rate or Lump Sum in Words:***	m²	120		
9.5.1.2	Super Rubber Paint for old walls and ceilings ***Rate or Lump Sum in Words:***	m²	450		
9.5.1.3	Oil Paint for new walls and ceilings ***Rate or Lump Sum in Words:***	m²			
9.5.1.4	Oil Paints for old walls and ceilings ***Rate or Lump Sum in Words:***	m²	300		

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.5.2 9.5.2.1	**<u>Outside Walls Paint (Old and New Walls and Ceilings)</u>** 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. ***Rate or Lump Sum in Words:***	m²			
9.5.6	**<u>Epoxy coating (Playground -covered indoor Car Parking)</u>**				
9.5.6.5a New Item	For Roof ***Rate or Lump Sum in Words:***	m²			
	FINISHES **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10	**SPECIALTIES**				
10.1	**Bathrooms Accessories** - 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				
10.1.1 10.1.1.1	**Paper Roller Holder** Supply and install paper holder no rust, no stain stainless steel 316 with all accessories and fixation (anti-rust materials) for good quality and at the places shown on drawings All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	№ 			
10.1.2 10.1.2.1	**Soap Dispenser** Supply and install stainless steel 316 no rust, no stain, soap dispenser wall type fixation (anti-rust materials and accessories) with all needed items All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	 № 			
10.1.3 10.1.3.1	**Paper Holder Box** Supply and install paper holder box from stainless steel 316 no rust, no stain, with all needed works and fixation (anti-rust materials and accessories) The box should be from a good manufacturer All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	 № 			
10.1.4	**Mirror for Lavatories** 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 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) ***Rate or Lump Sum in Words:***	№ 	2		

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10.1.5	**<u>Handicapped Bathroom Accessories</u>** - Remove and cart away old damaged fixtures Supply and install all needed bars for the handicapped toilet of stainless steel 316 Work to include: - Materials - Labors - and all needed items as per the Engineer instructions				
10.1.5.1	Supply and install vertical grab rail 60cm bars ***Rate or Lump Sum in Words:***	№			
10.1.5.2	Supply and install Horizontal grab rail 60cm bars ***Rate or Lump Sum in Words:***	№			
10.1.5.3	Supply and install Drop Down Rail removable arm 80cm ***Rate or Lump Sum in Words:***	№			
10.1.5.4	Alarm pull cord for emergency ***Rate or Lump Sum in Words:***	№			
10.1.5.5a New Item	Supply and install partition between urinals similar to existing with all needed fixation accessories ***Rate or Lump Sum in Words:***	№			
10.2	**Classroom Specialties**				
10.2.1 10.2.1.1	**<u>White Teaching Boards</u>** Supply and install White teaching boards from approved manufacturer as per specifications of Ministry of Education and Higher Education and corresponding to the site Cost to include: - (3600mm x 1200mm) final dimensions as per site limitation - Materials and labors - Felt marker pens and eraser (12 marker pens + 2 erases for each white board) - Stainless Steel screws - Remove the existing board - All needed works as per the Engineer instructions ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10.3	**Resin Work**				
10.3.1	**Drinking Basin** 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) ***Rate or Lump Sum in Words:***	№			
10.3.1.7a New Item	Rehabilitation of existing Drinking Basin - Any Length (Traps, Taps, Cleaning and repair of any damaged elements) ***Rate or Lump Sum in Words:***	№			
10.3.4	**Kitchen Counter** 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				
10.3.4.3	Kitchen Counter - Length (1.76 to 2.05 m) ***Rate or Lump Sum in Words:***	№	1		
10.5	**Internal Curtains** Supply and install internal rolling type tissue and polyester collapsible type curtain as per specifications and at the location as shown on drawings Works to include: - Materials - Labors - Heavy Duty Accessories - All needed works as per the Engineer instructions and approval				
10.5.1	On External Opening ***Rate or Lump Sum in Words:***	m²	40		
	SPECIALTIES **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
11	**EQUIPMENT**				
	EQUIPMENT **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
12	**FURNISHINGS**				
12.1	**INSTITUTIONAL FURNITURE** Supply and install the following institutional furniture complete including all necessary fixing and accessories, all as specified, shown on the drawings and to the satisfaction of the Engineer.				
12.1.1	**Classrooms Furniture**				
12.1.1.1	Standard desk with chair for classroom, single seat. ***Rate or Lump Sum in Words:***	№			
12.1.2	**Conference Room Furniture**				
12.1.2.1	Standard table. ***Rate or Lump Sum in Words:***	№			
12.1.2.2	Standard chairs. ***Rate or Lump Sum in Words:***	№			
12.1.6 12.1.6.1	**Hooks with Rails for Hats and Coats** Hooks with rails for hats and coats, rail size 120mm high x 20mm thick, softwood, treated and painted, countersunk screwed to wall & painted steel hooks every 200 mm (5№ hooks per linear meter of rail). ***Rate or Lump Sum in Words:***	lm			
	FURNISHINGS **TOTAL CARRIED TO COLLECTION**				

Collection

Page №		Amount (US $)
2.1	SITE PREPARATION AND DEMOLITION	.....
2.2	EXTERNAL WORKS	.....
2.3	CONCRETE	.....
2.4	MASONRY	.....
2.5	METAL WORKS	.....
2.6	WOOD AND PLASTICS	.....
2.7	THERMAL AND MOISTURE PROTECTION	.....
2.8	DOOR AND WINDOWS	.....
2.9	FINISHES	.....
2.10	SPECIALTIES	.....
2.11	EQUIPMENT	.....
2.12	FURNISHINGS	.....
	Total Carried to General Summary	.....



Bill № 3: Mechanical Engineering Services



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**GENERAL TECHNICAL REQUIREMENTS**				
1.1	**General Mechanical Requirements**				
1.1.1	Revise all Mechanical drawings and make sure that they can be executed properly. ***Rate or Lump Sum in Words:***	Item	1		
1.2	**Rehabilitation Works General Requirements** 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, floor drains, roof drains, manholes, pumps, WC tanks, adding where applicable all necessary valves, flush valves, etc., and all other necessary works. ***Rate or Lump Sum in Words:***	Item	1		
1.2.2	Maintenance and rehabilitation of existing HVAC & fire fighting systems, including all necessary piping, duct works, pumps and controls, fans, mechanical works inside shafts, air conditioning units, etc. ***Rate or Lump Sum in Words:***	Item			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1.2.3a New Item	Contractor Shall remove existing, newly added showers. Works to include - Removal of fixtures (Shower head or hand) - Replacement of damaged tiles by new one similar to existing. All other nessessary works (Finishes and mechanical works) ***Rate or Lump Sum in Words:***	№			
1.2.4a New Item	Contractor Shall remove existing, newly added Water Heater . Works to include - Removal of all pipes and accessories - Replacement of damaged tiles by new one similar to existing. All other nessessary works (Finishes and mechanical works) ***Rate or Lump Sum in Words:***	№			
	GENERAL TECHNICAL REQUIREMENTS **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION**				
2.3	**Drain Cover** Supply and install floor drain cover (P.E) 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 Engineer instructions				
2.3.1	Cover for FCO ***Rate or Lump Sum in Words:***	№			
	SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**WATER PIPE WORK INSTALLATION**				
3.2	**Electrical Water Heater** Electrical water heater as specified and scheduled; include pipe work connections, temperature and pressure gauges, control and power wiring from the MCC, hot water and pipe work connections, control and high limit control valves, isolation and safety valves, thermal insulation, valve boxes, bonding and identification, and the heater should be of a good trade mark of European or west made or first class Lebanese product.				
3.2.2	EWH-02 (100 L) ***Rate or Lump Sum in Words:***	№			
	WATER PIPE WORK INSTALLATION **TOTAL CARRIED TO COLLECTION**				
4	**FIRE PROTECTION**				
	FIRE PROTECTION **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**SANITARY FIXTURES**				
5.2	**W.C. For Non Kids** 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 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)				
5.2.1	EWC-01 (Wall Hang - 52 x 36 cm) ***Rate or Lump Sum in Words:***	№			
5.2.3a New Item	EWC Accessories (Seat Cover - Flush Tank Cover / Push Button Etc…) ***Rate or Lump Sum in Words:***	№	5		
5.4	**Lavatories for Non Kids** Supply and install semi pedestal wash basin similar to Ideal Standard No. 742001 or approved equal 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) ***Rate or Lump Sum in Words:***	№			
5.4.2	LAV-02 (wall hang, handicapped with mixers 56 x 41 cm) ***Rate or Lump Sum in Words:***	№			
5.4.3a	LAV accessories (Traps - Mixers - Fixation, Etc…) ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5.5	**Urinal** Supply and installation of high quality urinal units complete with proper wall fixation with anti-dust materials including drainage & water supply connection as per the approved shop drawings. Cost to include all necessary accessories, valves, sensors to provide workable system.				
5.5.1	Urinal ***Rate or Lump Sum in Words:***	№			
5.6	**Self Close Taps on Kids & Students Lavatories** Supply and install self close taps to be fixed in the lavatory body as manufactured by Grohe Item No. 36-173 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 ***Rate or Lump Sum in Words:***	№			
5.7	**Wall Type Self Close Taps on Drinking Basins** Supply and install self close taps to be fixed in the drinking basin body as manufactured by Grohe Item No. 36-176 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 ***Rate or Lump Sum in Words:***	№			
5.8	**Kitchen Sink Accessories** Supply and install kitchen sink accessories such as chrome trap, angle valve, mixers as specified				
5.8.1	Kitchen Sink Accessories ***Rate or Lump Sum in Words:***	№	1		

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5.10	**Lavatories Resin Accessories** Supply and install lavatories resin accessories such as chrome trap, angle valves as specified				
5.10.1	Lavatories Resin Accessories ***Rate or Lump Sum in Words:***	№			
5.14	**Hose Bib** Supply and install Hose Bib taps including water connection & all necessary accessories as required				
5.14.1	HB - 01 ***Rate or Lump Sum in Words:***	№	4		
5.14.2a New Item	Maintenace of Potable Water System Contractor shall ensure proper functionality of the system ***Rate or Lump Sum in Words:***	Item			
5.14.3a New Item	Rehabilitation of existing septic tank, including cleaning, crack and joint sealing, waterproofing, replacement of damaged fittings, and all necessary works to restore watertightness and proper operation ***Rate or Lump Sum in Words:***	Item	1		
	SANITARY FIXTURES **TOTAL CARRIED TO COLLECTION**				

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3.3	WATER PIPE WORK INSTALLATION	.....
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Bill № 4: Electrical Engineering Services



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**BASIC ELECTRICAL REQUIREMENTS** 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	**Fixing and Repairing** 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 ***Rate or Lump Sum in Words:***	LS	1		
1.1.2	Wires and cables ***Rate or Lump Sum in Words:***	LS			
1.1.3	Sockets and switches ***Rate or Lump Sum in Words:***	LS	1		
1.1.4	Circuit breakers ***Rate or Lump Sum in Words:***	LS			
1.1.5	Disconnecting switches ***Rate or Lump Sum in Words:***	LS			
	BASIC ELECTRICAL REQUIREMENTS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**PANELBOARDS**				
2.2	**Computer Lab Panel Board (Rehabilitation)**				
2.2.1	Rehabilitate and install the Computer Lab Panel Board, works to include: - Rehabilitation and connection - Wires installation - Accessories - All Accessories Failed Complete to shop drawings and to the satisfaction of the engineer (ready to use) ***Rate or Lump Sum in Words:***	№			
2.3a New Item	Supply and Install New Panel Board Cover ***Rate or Lump Sum in Words:***	№			
	PANELBOARDS **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**GENERAL LIGHTING INSTALLATIONS**				
3.1	**Lighting Fixtures** 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 φ ≥ 0.9 ***Rate or Lump Sum in Words:***	№			
3.1.2	Replace existing lighting fixtures with C1 ***Rate or Lump Sum in Words:***	№			
3.1.3	TYPE C2: as same as TYPE C1 but Pendent mounted ***Rate or Lump Sum in Words:***	№			
3.1.4	TYPE A2 / A3: 600x600 mm LED Panel 3600lm, 33W, 4000K, 80CRI surface-mount/recessed, die-cast aluminum, IP20 ***Rate or Lump Sum in Words:***	№			
3.1.5	TYPE A1: as same as TYPE A2 but Pendent mounted ***Rate or Lump Sum in Words:***	№			
3.1.6	TYPE N4 / N3: LED - 900lm - 12.5W - 3000K - 80CRI - WW Surface mounted / Recessed Downlight Round - 120 deg ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3.1.7	TYPE F: PLAFONIERA OVAL Wall mounted - IP54 Aluminum die-cast housing IK 06 - CLASS I Lamp SHOULD BE LED 900Lm, 4000K, 17W. ***Rate or Lump Sum in Words:***	№			
3.1.8	TYPE W: A++ / COB LED 3000K 230V CRI 90 - 3955lm - 42W IP65 - IK07 - Die-cast EN AB-47100 aluminum housing with high corrosion resistance. ***Rate or Lump Sum in Words:***	№			
3.1.9	TYPE L (LED): OVAL 18W 516Lm IP54 IK06 FOR LIFT & TECHNICAL SHAFTS. Wall mounted luminaire Aluminum die cast housing in EN AB-47100 (low copper content) with high resistance against corrosion. IK 06 Sand blasted glass diffuser. Lamp fixed position. LOR 43% Isolation: CLASS I. Black (cod.09). Lamp not included. ***Rate or Lump Sum in Words:***	№			
3.1.10	Replace Existing lighting fixtures with TYPE L (LED) ***Rate or Lump Sum in Words:***	№			
3.1.11	TYPE M: LED - 1500lm - 17W - 4000K - 80CRI - Ceiling mounted - With Motion Sensor. ***Rate or Lump Sum in Words:***	№			
3.1.12	Replace Existing lighting fixtures with TYPE M ***Rate or Lump Sum in Words:***	№			
3.1.13	TYPE EM: Ceiling Emergency Ceiling mounted non-maintained 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65. ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3.1.14	Replace Existing EM with LED Emergency ***Rate or Lump Sum in Words:***	№			
3.1.15	TYPE EM: Wall Emergency Wall mounted non-maintained, 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65. ***Rate or Lump Sum in Words:***	№			
3.1.16	TYPE EX: Exit sign LED light wall/ceiling mounted maintained, 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65 with engraved letters on fixtures ***Rate or Lump Sum in Words:***	№			
3.1.17	Replace Existing Exit with LED Exits ***Rate or Lump Sum in Words:***	№			
3.1.18	TYPE H: High Bay LED Lightning fixture pendent 100W, 220V, 50Hz. ***Rate or Lump Sum in Words:***	№			
	GENERAL LIGHTING INSTALLATIONS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
4	**FIRE ALARM SYSTEM**				
	FIRE ALARM SYSTEM **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**DATA SYSTEM**				
	DATA SYSTEM **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
6	**UNINTERRUPTIBLE POWER SUPPLY (UPS)**				
	UNINTERRUPTIBLE POWER SUPPLY (UPS) TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
7	**CCTV SYSTEM** Supply, install, connect and test CCTV system complete with conduits installations from the location of the NVR through the different CCTV camera outlets, including the pull or draw boxes and derivation boxes, the junction and outlet boxes, 19" Rack, and all necessary connections to the management station as shown on drawings as per Tender Specifications and the like to the satisfaction of the supervision engineer.				
7.3a New Item	Replace existing Cameras by new one Similar to existing ***Rate or Lump Sum in Words:***	№			
	CCTV SYSTEM **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8	**SOLAR SYSTEM**				
8.1	Supply, install, connect and test the solar lighting system for all Electrical Loads (excluding Lifts, Pumps and AC Units) in perfect operating conditions, including but not limited to: - Photovoltaic multi-crystalline solar panels as shown on the drawings. - Hybrid Inverter - All cables, wires, conduits and all necessary accessories - Aluminum PV mountings - The Contractor shall ensure complete solar system which should function as the main Power Supply - The Contractor should submit detailed shop drawings and materials for approval. - For all blocks of the schools - Lithium Batteries for (Off-Grid Solar Types) - All necessary elevated structures on roof and other areas which are needed to install the required solar panel as mentioned on drawings (Sheds, Parking, etc.) areas ***Rate or Lump Sum in Words:***	LS			
8.1.2a	Replace Unfuctional Battery by new one similar to existing				
8.1.2.1a	Deye BOS-G 51.2 kWh High-Voltage $LiFePO_4$ Battery Energy Storage System – Complete Supply, Installation, Testing & Commissioning ***Rate or Lump Sum in Words:***	№			
8.1.2.1b	Deye BOS-GM5.1 HV $LiFePO_4$ Battery, 51.2 V, 100 Ah, 5.12 kWh, including installation, testing and commissioning ***Rate or Lump Sum in Words:***	№			
8.1.2.1c	Acid Battery, 12 V, 250 Ah ***Rate or Lump Sum in Words:***	№			
	SOLAR SYSTEM **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9	**BELL SYSTEM**				
	BELL SYSTEM **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10	**LIFTS REHABILITATION**				
10.1	Rehabilitation of the 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: 650kg Speed: 1.5mps Entrance size/ type: 1100 mm wide single speed center opening ***Rate or Lump Sum in Words:***	№			
	LIFTS REHABILITATION **TOTAL CARRIED TO COLLECTION**				

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General Summary
1571-Lala Secondary Public School



General Summary

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Bill № 3: Mechanical Engineering Services

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General Summary

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Bill № 2: Civil and Architectural Works



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**SITE PREPARATION AND DEMOLITION**				
1.1	**Demolishing and Removal of Debris**				
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. ***Rate or Lump Sum in Words:***	LS	1		
1.1a New Item	**Dismantling** The works include the dismantling works related to the newly installed water tanks and prefabricated units. - The contractor shall deliver the dismantled items to the Building administration / MEHE. ***Rate or Lump Sum in Words:***				
1.1.1.a New Item	Water Tanks ***Rate or Lump Sum in Words:***	№			
1.1.1.b New Item	Prefabricated Units ***Rate or Lump Sum in Words:***	№			
1.1.1.c New Item	Partitions of any type ***Rate or Lump Sum in Words:***	m2			
	SITE PREPARATION AND DEMOLITION **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**EXTERNAL WORKS**				
2.4 2.4.2	**School Fences with Related Gates** Rehabilitate Existing Fence (Strengthening & Rehabilitation) Work to include - Rehabilitate and support all the existing fence as per drawings - Determine the places that requires support - Preparation of shop drawings - Replace all broken elements - Redo all damaged elements and to be similar to existing elements - Finishing works as existing (plastering, paints, stone cladding, etc.) - Rehabilitate existing steel protection (Replace all damaged part by new similar to existing and paint with epoxy as specified) - Replace existing chain link by new one (Galvanized) - Reconstruct the broken and damaged parts and rehabilitate as it was with all similar materials including steel parts with related epoxy paint as per the engineer instructions ***Rate or Lump Sum in Words:***	m			
2.5 2.5.1	**Ramp for External Existing Sidewalk** 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 ***Rate or Lump Sum in Words:***	LS			
	EXTERNAL WORKS **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**CONCRETE** **Not Applicable**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
4	**MASONRY**				
	SITE PREPARATION AND DEMOLITION **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**METAL WORKS**				
5.1	**Provide New Steel Work (Door & Windows)**				
5.1.3	Provide new double glazed aluminum windows with new burglar proof protection ***Rate or Lump Sum in Words:***	№			
5.2	**Rehabilitate and Maintain the Existing Steel Work (Burglar Proof Protection + Opening)** 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 ***Rate or Lump Sum in Words:***	№	2		
5.2.7b New Item	Rehabilitate existing steel doors work to include all door accessories such as lock, handle and all necessary accessories. ***Rate or Lump Sum in Words:***	№			
5.5a New Item	**Steel Handrail** - Provide new metal handrail similar to exist with all all necessary accessories - Apply one layer of epoxy base paint - Apply putty - Apply epoxy paint as per specification All needed items as per the Engineer instructions				
5.5.1a New Item	Above Parapet ***Rate or Lump Sum in Words:***	m			
	METAL WORKS **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
6	**WOOD AND PLASTICS**				
6.1	**Joinery Works**				
6.1.1	**Rehabilitate Existing Kitchen Cupboards** 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 ***Rate or Lump Sum in Words:***	m			
6.1.2	**Rehabilitate Timber Cupboard** Rehabilitate timber cupboards with plastic laminate color, work to include sub framing, drawer units, shelves, fixing and fastening hardware, heavy duty ironmongery, accessories, including finish, soft close, painting and all other related auxiliaries works as required by engineer - 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. - (No patching is allowed for existing wooden works) ***Rate or Lump Sum in Words:***	m^2			
	WOOD AND PLASTICS **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
7	**THERMAL AND MOISTURE PROTECTION**				
7.0	**Preliminaries**				
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 ***Rate or Lump Sum in Words:***	LS			
7.1 7.1.1	**Roof Waterproofing** 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 & debris - 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/m³ where required - Provide Geotextile layers - Provide all aluminum flashing with mastic - Provide finishing material as required - All as specified and approved shop drawings ***Rate or Lump Sum in Words:***	m²			
	THERMAL AND MOISTURE PROTECTION **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8	**DOOR AND WINDOWS**				
8.1	**Wooden Doors and Windows** 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	**Timber Doors** 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				
8.1.1.2	Provide new single leaf wooden door with view frame ***Rate or Lump Sum in Words:***	№			
8.1.1.5	Provide new toilet doors with related accessories as per specifications ***Rate or Lump Sum in Words:***	№			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.1.3	**Rehabilitate the Existing Timber Doors** 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.				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.1.3.1.1	Rehabilitate and paint existing single leaf timber doors with related accessories ***Rate or Lump Sum in Words:***	№	3		
8.1.3.1.5a New Item	Supply and install wooden doors accessories (Handle - Lock - Etc…) ***Rate or Lump Sum in Words:***	№	5		
8.1.3.1.6a New Item	Replace broken glass of the wooden door view access window ***Rate or Lump Sum in Words:***	№			



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
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)				
8.2.1.1	Provide new aluminum double glazed window & door panel ***Rate or Lump Sum in Words:***	№			
8.2.1.4	Replace existing elements by new single glazed aluminum windows (6mm) if the quantity of broken glass does not exceed 30% of whole building ***Rate or Lump Sum in Words:***	№			
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. ***Rate or Lump Sum in Words:***	№			
8.2.2.2	Provide new single glazed aluminum partition double leaf door ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
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 ***Rate or Lump Sum in Words:***	№			
8.2.3.1a New Item	Rehabilitate existing Doors ***Rate or Lump Sum in Words:***	№			
8.2.3.2a New Item	Rehabilitate existing aluminum Doors / Windows with all related accessories without Glass ***Rate or Lump Sum in Words:***	№			
	DOOR AND WINDOWS **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9	**FINISHES**				
9.1	**Cement Plaster** 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 9.1.1.1	**Internal and External Plaster Works** 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. ***Rate or Lump Sum in Words:***	m^2	10		

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.1.2	**Repair of Existing Plaster (Internal - External) (Cracks, etc.)**				
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. Fill 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		



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2	**Tiling Works (Similar to existing)** 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				
9.2.2 9.2.2.1	**New Glazed Colored Ceramic for Walls** Supply and install glazed colored ceramic for walls Include Ceramic Corner (first choice) ***Rate or Lump Sum in Words:***	m^2			
9.2.4 9.2.4.1	**Repair existing broken floor tiles and skirting (all types) and reinstall by new, similar to existing for all rooms and corridors** 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. ***Rate or Lump Sum in Words:***	LS			



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2.4a New Item	**Repair existing broken tiles (all types) and reinstall by new, similar to existing for toilets, drinking Basin and kitchen**				
9.2.4.1a New Item	Rehabilitate and repair all damaged and broken tiles, 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. ***Rate or Lump Sum in Words:***	m^2			
9.2.7	**Clean and Rub the Existing Floor Tiles and Skirting** 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				
9.2.7.2	Type 2: Ceramic ***Rate or Lump Sum in Words:***	m^2			
9.2.7.3	Type 3: Mosaic ***Rate or Lump Sum in Words:***	m^2			
9.2.7.5	Type 5: Skirting (any type and size) ***Rate or Lump Sum in Words:***	m			
9.2.7.8a New Item	Type 8: Terrazzo ***Rate or Lump Sum in Words:***	m^2			
9.2.7.10a New Item	Type 10: Dismantling of the existing Faux parquet, Rehabilitate, Clean and Rub the Existing any type of flooring tiles and skirting ***Rate or Lump Sum in Words:***	m^2			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2.8	**Clean the Existing Decorative Wall Tiles** Rehabilitate any type of decorative wall tiles (mosaic - marble - etc.) Work to include: - All materials and labors - Grouting - Polish and rubbing - All needed items as per the Engineer instruction. - Works to be executed by experts				
9.2.8.4	Type 4: Terrazzo ***Rate or Lump Sum in Words:***	m²			
9.2.9	**Colored PVC for Covered Indoor KG Playgrounds** Supply and install first class safe and antibacterial colored P.V.C. flooring for indoor KG playgrounds at least 6mm thick (Design shape and colors of vinyl flooring should be approved by engineer prior to installation) Work to include: - Shop drawing for design, shape and colors of vinyl flooring should be submitted for each classroom separately for engineer approval - Laminate existing finish flooring after removing vinyl by special concrete material level - Make good and smooth the flooring - Apply self leveling special materials(if needed) to assume Vinyl best finishing - Remove all the existing skirting - Treat the place of the existing skirting - Place the special glue as specified - Place the flooring and screw the skirting P.V.C. profile Labors and materials, screw, etc. All needed items as per the Engineer instructions and approval. Note: Work should be executed by experts and should be executed in presence and approval of supervision engineer and as per required specifications for materials and executions. ***Rate or Lump Sum in Words:***	m²			



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.3	**Suspended Ceilings (Similar to existing)** 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 specifications - 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	**Metal Sheet Strips Suspended Ceilings:**				
9.3.1.2	60 x 60 cm Aluminum Suspended Ceiling ***Rate or Lump Sum in Words:***	m^2			
9.4	**Gypsum Works (Similar to existing)**				
9.4.2 9.4.2.1	**Rehabilitate Existing Gypsum Suspended Ceiling (Tiles, Panels)** Rehabilitate existing gypsum board suspended ceiling n the case of damage or during construction. Works to include material, labor, equipment, etc. and to the engineer's approval ***Rate or Lump Sum in Words:***	m^2			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.5	**Painting**				
9.5.1	**Wall and Ceilings Paint Works** 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, ***All paint types must be lead-free and Low VOC (Volatile Organic Compounds)***				
9.5.1.1	Super Rubber Paint for new walls and ceilings ***Rate or Lump Sum in Words:***	m²	400		
9.5.1.2	Super Rubber Paint for old walls and ceilings ***Rate or Lump Sum in Words:***	m²			
9.5.1.3	Oil Paint for new walls and ceilings ***Rate or Lump Sum in Words:***	m²	700		
9.5.1.4	Oil Paints for old walls and ceilings ***Rate or Lump Sum in Words:***	m²			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.5.2 9.5.2.1	**<u>Outside Walls Paint (Old and New Walls and Ceilings)</u>** 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. ***Rate or Lump Sum in Words:***	m^2			
9.5.6	**<u>Epoxy coating (Playground -covered indoor Car Parking)</u>**				
9.5.6.5a New Item	For Roof ***Rate or Lump Sum in Words:***	m^2			
	FINISHES **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10	**SPECIALTIES**				
10.1	**Bathrooms Accessories** - 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				
10.1.1 10.1.1.1	**Paper Roller Holder** Supply and install paper holder no rust, no stain stainless steel 316 with all accessories and fixation (anti-rust materials) for good quality and at the places shown on drawings All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	№ 			
10.1.2 10.1.2.1	**Soap Dispenser** Supply and install stainless steel 316 no rust, no stain, soap dispenser wall type fixation (anti-rust materials and accessories) with all needed items All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	 № 			
10.1.3 10.1.3.1	**Paper Holder Box** Supply and install paper holder box from stainless steel 316 no rust, no stain, with all needed works and fixation (anti-rust materials and accessories) The box should be from a good manufacturer All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	 № 			
10.1.4	**Mirror for Lavatories** 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 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) ***Rate or Lump Sum in Words:***	№ 			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10.1.5	**<u>Handicapped Bathroom Accessories</u>** - Remove and cart away old damaged fixtures Supply and install all needed bars for the handicapped toilet of stainless steel 316 Work to include: - Materials - Labors - and all needed items as per the Engineer instructions				
10.1.5.1	Supply and install vertical grab rail 60cm bars ***Rate or Lump Sum in Words:***	№			
10.1.5.2	Supply and install Horizontal grab rail 60cm bars ***Rate or Lump Sum in Words:***	№			
10.1.5.3	Supply and install Drop Down Rail removable arm 80cm ***Rate or Lump Sum in Words:***	№			
10.1.5.4	Alarm pull cord for emergency ***Rate or Lump Sum in Words:***	№			
10.1.5.5a New Item	Supply and install partition between urinals similar to existing with all needed fixation accessories ***Rate or Lump Sum in Words:***	№			
10.2	**Classroom Specialties**				
10.2.1 10.2.1.1	**<u>White Teaching Boards</u>** Supply and install White teaching boards from approved manufacturer as per specifications of Ministry of Education and Higher Education and corresponding to the site Cost to include: - (3600mm x 1200mm) final dimensions as per site limitation - Materials and labors - Felt marker pens and eraser (12 marker pens + 2 erases for each white board) - Stainless Steel screws - Remove the existing board - All needed works as per the Engineer instructions ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10.3	**Resin Work**				
10.3.1	**Drinking Basin** 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) ***Rate or Lump Sum in Words:***	№			
10.3.1.7a New Item	Rehabilitation of existing Drinking Basin - Any Length (Traps, Taps, Cleaning and repair of any damaged elements) ***Rate or Lump Sum in Words:***	№			
10.3.4	**Kitchen Counter** 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				
10.3.4.3	Kitchen Counter - Length (1.76 to 2.05 m) ***Rate or Lump Sum in Words:***	№			
10.5	**Internal Curtains** Supply and install internal rolling type tissue and polyester collapsible type curtain as per specifications and at the location as shown on drawings Works to include: - Materials - Labors - Heavy Duty Accessories - All needed works as per the Engineer instructions and approval				
10.5.1	On External Opening ***Rate or Lump Sum in Words:***	m²	30		
	SPECIALTIES **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
11	**EQUIPMENT**				
	EQUIPMENT **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
12	**FURNISHINGS**				
12.1	**INSTITUTIONAL FURNITURE** Supply and install the following institutional furniture complete including all necessary fixing and accessories, all as specified, shown on the drawings and to the satisfaction of the Engineer.				
12.1.1	**Classrooms Furniture**				
12.1.1.1	Standard desk with chair for classroom, single seat. ***Rate or Lump Sum in Words:***	№			
12.1.2	**Conference Room Furniture**				
12.1.2.1	Standard table. ***Rate or Lump Sum in Words:***	№			
12.1.2.2	Standard chairs. ***Rate or Lump Sum in Words:***	№			
12.1.6 12.1.6.1	**Hooks with Rails for Hats and Coats** Hooks with rails for hats and coats, rail size 120mm high x 20mm thick, softwood, treated and painted, countersunk screwed to wall & painted steel hooks every 200 mm (5№ hooks per linear meter of rail). ***Rate or Lump Sum in Words:***	lm			
	FURNISHINGS **TOTAL CARRIED TO COLLECTION**				

Collection

Page №		Amount (US $)
2.1	SITE PREPARATION AND DEMOLITION	.....
2.2	EXTERNAL WORKS	.....
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2.4	MASONRY	.....
2.5	METAL WORKS	.....
2.6	WOOD AND PLASTICS	.....
2.7	THERMAL AND MOISTURE PROTECTION	.....
2.8	DOOR AND WINDOWS	.....
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	Total Carried to General Summary	.....

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Bill № 3: Mechanical Engineering Services



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**GENERAL TECHNICAL REQUIREMENTS**				
1.1	**General Mechanical Requirements**				
1.1.1	Revise all Mechanical drawings and make sure that they can be executed properly. ***Rate or Lump Sum in Words:***	Item			
1.2	**Rehabilitation Works General Requirements** 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, floor drains, roof drains, manholes, pumps, WC tanks, adding where applicable all necessary valves, flush valves, etc., and all other necessary works. ***Rate or Lump Sum in Words:***	Item	1		
1.2.2	Maintenance and rehabilitation of existing HVAC & fire fighting systems, including all necessary piping, duct works, pumps and controls, fans, mechanical works inside shafts, air conditioning units, etc. ***Rate or Lump Sum in Words:***	Item			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1.2.3a New Item	Contractor Shall remove existing, newly added showers. Works to include - Removal of fixtures (Shower head or hand) - Replacement of damaged tiles by new one similar to existing. All other nessessary works (Finishes and mechanical works) ***Rate or Lump Sum in Words:***	№			
1.2.4a New Item	Contractor Shall remove existing, newly added Water Heater . Works to include - Removal of all pipes and accessories - Replacement of damaged tiles by new one similar to existing. All other nessessary works (Finishes and mechanical works) ***Rate or Lump Sum in Words:***	№	2		
	GENERAL TECHNICAL REQUIREMENTS **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION**				
2.3	**Drain Cover** Supply and install floor drain cover (P.E) 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 Engineer instructions				
2.3.1	Cover for FCO ***Rate or Lump Sum in Words:***	№			
	SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**WATER PIPE WORK INSTALLATION**				
3.2	**Electrical Water Heater** Electrical water heater as specified and scheduled; include pipe work connections, temperature and pressure gauges, control and power wiring from the MCC, hot water and pipe work connections, control and high limit control valves, isolation and safety valves, thermal insulation, valve boxes, bonding and identification, and the heater should be of a good trade mark of European or west made or first class Lebanese product.				
3.2.2	EWH-02 (100 L) ***Rate or Lump Sum in Words:***	№			
	WATER PIPE WORK INSTALLATION TOTAL CARRIED TO COLLECTION				
4	**FIRE PROTECTION**				
	FIRE PROTECTION TOTAL CARRIED TO COLLECTION				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**SANITARY FIXTURES**				
5.2	**W.C. For Non Kids** 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 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)				
5.2.1	EWC-01 (Wall Hang - 52 x 36 cm) ***Rate or Lump Sum in Words:***	№			
5.2.3a New Item	EWC Accessories (Seat Cover - Flush Tank Cover / Push Button Etc…) ***Rate or Lump Sum in Words:***	№			
5.4	**Lavatories for Non Kids** Supply and install semi pedestal wash basin similar to Ideal Standard No. 742001 or approved equal 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) ***Rate or Lump Sum in Words:***	№			
5.4.2	LAV-02 (wall hang, handicapped with mixers 56 x 41 cm) ***Rate or Lump Sum in Words:***	№	1		
5.4.3a	LAV accessories (Traps - Mixers - Fixation, Etc…) ***Rate or Lump Sum in Words:***	№			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5.5	**Urinal** Supply and installation of high quality urinal units complete with proper wall fixation with anti-dust materials including drainage & water supply connection as per the approved shop drawings. Cost to include all necessary accessories, valves, sensors to provide workable system.				
5.5.1	Urinal ***Rate or Lump Sum in Words:***	№			
5.6	**Self Close Taps on Kids & Students Lavatories** Supply and install self close taps to be fixed in the lavatory body as manufactured by Grohe Item No. 36-173 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 ***Rate or Lump Sum in Words:***	№			
5.7	**Wall Type Self Close Taps on Drinking Basins** Supply and install self close taps to be fixed in the drinking basin body as manufactured by Grohe Item No. 36-176 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 ***Rate or Lump Sum in Words:***	№			
5.8	**Kitchen Sink Accessories** Supply and install kitchen sink accessories such as chrome trap, angle valve, mixers as specified				
5.8.1	Kitchen Sink Accessories ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5.10	**Lavatories Resin Accessories** Supply and install lavatories resin accessories such as chrome trap, angle valves as specified				
5.10.1	Lavatories Resin Accessories ***Rate or Lump Sum in Words:***	№			
5.14	**Hose Bib** Supply and install Hose Bib taps including water connection & all necessary accessories as required				
5.14.1	HB - 01 ***Rate or Lump Sum in Words:***	№			
5.14.2a New Item	Maintenace of Potable Water System Contractor shall ensure proper functionality of the system ***Rate or Lump Sum in Words:***	Item			
5.14.3a New Item	Rehabilitation of existing septic tank, including cleaning, crack and joint sealing, waterproofing, replacement of damaged fittings, and all necessary works to restore watertightness and proper operation ***Rate or Lump Sum in Words:***	Item			
	SANITARY FIXTURES **TOTAL CARRIED TO COLLECTION**				

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Page №		Amount (US $)
3.1	GENERAL TECHNICAL REQUIREMENTS	.....
3.2	SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION	.....
3.3	WATER PIPE WORK INSTALLATION	.....
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	Total Carried to General Summary	.....

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Bill № 4: Electrical Engineering Services



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**BASIC ELECTRICAL REQUIREMENTS** 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	**Fixing and Repairing** 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 ***Rate or Lump Sum in Words:***	LS	1		
1.1.2	Wires and cables ***Rate or Lump Sum in Words:***	LS			
1.1.3	Sockets and switches ***Rate or Lump Sum in Words:***	LS	1		
1.1.4	Circuit breakers ***Rate or Lump Sum in Words:***	LS			
1.1.5	Disconnecting switches ***Rate or Lump Sum in Words:***	LS			
	BASIC ELECTRICAL REQUIREMENTS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**PANELBOARDS**				
2.2	**Computer Lab Panel Board (Rehabilitation)**				
2.2.1	Rehabilitate and install the Computer Lab Panel Board, works to include: - Rehabilitation and connection - Wires installation - Accessories - All Accessories Failed Complete to shop drawings and to the satisfaction of the engineer (ready to use) ***Rate or Lump Sum in Words:***	№			
2.3a New Item	Supply and Install New Panel Board Cover ***Rate or Lump Sum in Words:***	№			
	PANELBOARDS **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**GENERAL LIGHTING INSTALLATIONS**				
3.1	**Lighting Fixtures** 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 φ ≥ 0.9 ***Rate or Lump Sum in Words:***	№			
3.1.2	Replace existing lighting fixtures with C1 ***Rate or Lump Sum in Words:***	№			
3.1.3	TYPE C2: as same as TYPE C1 but Pendent mounted ***Rate or Lump Sum in Words:***	№			
3.1.4	TYPE A2 / A3: 600x600 mm LED Panel 3600lm, 33W, 4000K, 80CRI surface-mount/recessed, die-cast aluminum, IP20 ***Rate or Lump Sum in Words:***	№			
3.1.5	TYPE A1: as same as TYPE A2 but Pendent mounted ***Rate or Lump Sum in Words:***	№			
3.1.6	TYPE N4 / N3: LED - 900lm - 12.5W - 3000K - 80CRI - WW Surface mounted / Recessed Downlight Round - 120 deg ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3.1.7	TYPE F: PLAFONIERA OVAL Wall mounted - IP54 Aluminum die-cast housing IK 06 - CLASS I Lamp SHOULD BE LED 900Lm, 4000K, 17W. ***Rate or Lump Sum in Words:***	№			
3.1.8	TYPE W: A++ / COB LED 3000K 230V CRI 90 - 3955lm - 42W IP65 - IK07 - Die-cast EN AB-47100 aluminum housing with high corrosion resistance. ***Rate or Lump Sum in Words:***	№			
3.1.9	TYPE L (LED): OVAL 18W 516Lm IP54 IK06 FOR LIFT & TECHNICAL SHAFTS. Wall mounted luminaire Aluminum die cast housing in EN AB-47100 (low copper content) with high resistance against corrosion. IK 06 Sand blasted glass diffuser. Lamp fixed position. LOR 43% Isolation: CLASS I. Black (cod.09). Lamp not included. ***Rate or Lump Sum in Words:***	№			
3.1.10	Replace Existing lighting fixtures with TYPE L (LED) ***Rate or Lump Sum in Words:***	№			
3.1.11	TYPE M: LED - 1500lm - 17W - 4000K - 80CRI - Ceiling mounted - With Motion Sensor. ***Rate or Lump Sum in Words:***	№			
3.1.12	Replace Existing lighting fixtures with TYPE M ***Rate or Lump Sum in Words:***	№			
3.1.13	TYPE EM: Ceiling Emergency Ceiling mounted non-maintained 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65. ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3.1.14	Replace Existing EM with LED Emergency ***Rate or Lump Sum in Words:***	№			
3.1.15	TYPE EM: Wall Emergency Wall mounted non-maintained, 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65. ***Rate or Lump Sum in Words:***	№			
3.1.16	TYPE EX: Exit sign LED light wall/ceiling mounted maintained, 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65 with engraved letters on fixtures ***Rate or Lump Sum in Words:***	№			
3.1.17	Replace Existing Exit with LED Exits ***Rate or Lump Sum in Words:***	№			
3.1.18	TYPE H: High Bay LED Lightning fixture pendent 100W, 220V, 50Hz. ***Rate or Lump Sum in Words:***	№			
	GENERAL LIGHTING INSTALLATIONS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
4	**FIRE ALARM SYSTEM**				
	FIRE ALARM SYSTEM **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**DATA SYSTEM**				
	DATA SYSTEM **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
6	**UNINTERRUPTIBLE POWER SUPPLY (UPS)**				
	UNINTERRUPTIBLE POWER SUPPLY (UPS) TOTAL CARRIED TO COLLECTION				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
7	**CCTV SYSTEM** Supply, install, connect and test CCTV system complete with conduits installations from the location of the NVR through the different CCTV camera outlets, including the pull or draw boxes and derivation boxes, the junction and outlet boxes, 19" Rack, and all necessary connections to the management station as shown on drawings as per Tender Specifications and the like to the satisfaction of the supervision engineer.				
7.3a New Item	Replace existing Cameras by new one Similar to existing ***Rate or Lump Sum in Words:***	№			
	CCTV SYSTEM **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8	**SOLAR SYSTEM**				
8.1	Supply, install, connect and test the solar lighting system for all Electrical Loads (excluding Lifts, Pumps and AC Units) in perfect operating conditions, including but not limited to: - Photovoltaic multi-crystalline solar panels as shown on the drawings. - Hybrid Inverter - All cables, wires, conduits and all necessary accessories - Aluminum PV mountings - The Contractor shall ensure complete solar system which should function as the main Power Supply - The Contractor should submit detailed shop drawings and materials for approval. - For all blocks of the schools - Lithium Batteries for (Off-Grid Solar Types) - All necessary elevated structures on roof and other areas which are needed to install the required solar panel as mentioned on drawings (Sheds, Parking, etc.) areas ***Rate or Lump Sum in Words:***	LS			
8.1.2a	Replace Unfuctional Battery by new one similar to existing				
8.1.2.1a	Deye BOS-G 51.2 kWh High-Voltage $LiFePO_4$ Battery Energy Storage System – Complete Supply, Installation, Testing & Commissioning ***Rate or Lump Sum in Words:***	№			
8.1.2.1b	Deye BOS-GM5.1 HV $LiFePO_4$ Battery, 51.2 V, 100 Ah, 5.12 kWh, including installation, testing and commissioning ***Rate or Lump Sum in Words:***	№			
8.1.2.1c	Acid Battery, 12 V, 250 Ah ***Rate or Lump Sum in Words:***	№			
	SOLAR SYSTEM **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9	**BELL SYSTEM**				
	BELL SYSTEM **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10	**LIFTS REHABILITATION**				
10.1	Rehabilitation of the 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: 650kg Speed: 1.5mps Entrance size/ type: 1100 mm wide single speed center opening ***Rate or Lump Sum in Words:***	№			
	LIFTS REHABILITATION TOTAL CARRIED TO COLLECTION				

Collection

Page №		Amount (US $)
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4.2	PANELBOARDS	.....
4.3	GENERAL LIGHTING INSTALLATIONS	.....
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General Summary
TVET 5-Qab Elias Technical Public School



General Summary

Description	Amount (US $)
Bill № 2: Civil and Architectural Works ……	.....
Bill № 3: Mechanical Engineering Services ……	.....
Bill № 4: 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:

.....

.....

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Description

Bill № 2: Civil and Architectural Works

Bill № 3: Mechanical Engineering Services

Bill № 4: Electrical Engineering Services

General Summary

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Bill № 2: Civil and Architectural Works



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**SITE PREPARATION AND DEMOLITION**				
1.1	**Demolishing and Removal of Debris**				
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. ***Rate or Lump Sum in Words:***	LS	1		
1.1a New Item	**Dismantling** The works include the dismantling works related to the newly installed water tanks and prefabricated units. - The contractor shall deliver the dismantled items to the Building administration / MEHE. ***Rate or Lump Sum in Words:***				
1.1.1.a New Item	Water Tanks ***Rate or Lump Sum in Words:***	№	2		
1.1.1.b New Item	Prefabricated Units ***Rate or Lump Sum in Words:***	№	4		
1.1.1.c New Item	Partitions of any type ***Rate or Lump Sum in Words:***	m2			
	SITE PREPARATION AND DEMOLITION **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**EXTERNAL WORKS**				
2.4 2.4.2	**School Fences with Related Gates** Rehabilitate Existing Fence (Strengthening & Rehabilitation) Work to include - Rehabilitate and support all the existing fence as per drawings - Determine the places that requires support - Preparation of shop drawings - Replace all broken elements - Redo all damaged elements and to be similar to existing elements - Finishing works as existing (plastering, paints, stone cladding, etc.) - Rehabilitate existing steel protection (Replace all damaged part by new similar to existing and paint with epoxy as specified) - Replace existing chain link by new one (Galvanized) - Reconstruct the broken and damaged parts and rehabilitate as it was with all similar materials including steel parts with related epoxy paint as per the engineer instructions ***Rate or Lump Sum in Words:***	m			
2.5 2.5.1	**Ramp for External Existing Sidewalk** 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 ***Rate or Lump Sum in Words:***	LS			
	EXTERNAL WORKS **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**CONCRETE** **Not Applicable**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
4	**MASONRY**				
	SITE PREPARATION AND DEMOLITION **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**METAL WORKS**				
5.1	**Provide New Steel Work (Door & Windows)**				
5.1.3	Provide new double glazed aluminum windows with new burglar proof protection ***Rate or Lump Sum in Words:***	№			
5.2	**Rehabilitate and Maintain the Existing Steel Work (Burglar Proof Protection + Opening)** 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 ***Rate or Lump Sum in Words:***	№			
5.2.7b New Item	Rehabilitate existing steel doors work to include all door accessories such as lock, handle and all necessary accessories. ***Rate or Lump Sum in Words:***	№			
5.5a New Item	**Steel Handrail** - Provide new metal handrail similar to exist with all all necessary accessories - Apply one layer of epoxy base paint - Apply putty - Apply epoxy paint as per specification All needed items as per the Engineer instructions				
5.5.1a New Item	Above Parapet ***Rate or Lump Sum in Words:***	m			
	METAL WORKS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
6	**WOOD AND PLASTICS**				
6.1	**Joinery Works**				
6.1.1	**Rehabilitate Existing Kitchen Cupboards** 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 ***Rate or Lump Sum in Words:***	m			
6.1.2	**Rehabilitate Timber Cupboard** Rehabilitate timber cupboards with plastic laminate color, work to include sub framing, drawer units, shelves, fixing and fastening hardware, heavy duty ironmongery, accessories, including finish, soft close, painting and all other related auxiliaries works as required by engineer - 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. - (No patching is allowed for existing wooden works) ***Rate or Lump Sum in Words:***	m^2			
	WOOD AND PLASTICS **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
7	**THERMAL AND MOISTURE PROTECTION**				
7.0	**Preliminaries**				
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 ***Rate or Lump Sum in Words:***	LS			
7.1 7.1.1	**Roof Waterproofing** 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 & debris - 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/m³ where required - Provide Geotextile layers - Provide all aluminum flashing with mastic - Provide finishing material as required - All as specified and approved shop drawings ***Rate or Lump Sum in Words:***	m²			
	THERMAL AND MOISTURE PROTECTION **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8	**DOOR AND WINDOWS**				
8.1	**Wooden Doors and Windows** 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	**Timber Doors** 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				
8.1.1.2	Provide new single leaf wooden door with view frame ***Rate or Lump Sum in Words:***	№			
8.1.1.5	Provide new toilet doors with related accessories as per specifications ***Rate or Lump Sum in Words:***	№	4		

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.1.3	**Rehabilitate the Existing Timber Doors** 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.				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.1.3.1.1	Rehabilitate and paint existing single leaf timber doors with related accessories ***Rate or Lump Sum in Words:***	№			
8.1.3.1.5a New Item	Supply and install wooden doors accessories (Handle - Lock - Etc…) ***Rate or Lump Sum in Words:***	№	8		
8.1.3.1.6a New Item	Replace broken glass of the wooden door view access window ***Rate or Lump Sum in Words:***	№			



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8.2	**Aluminum Doors and Windows** 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	**New Aluminum Panels (Double Glass)** Supply and install the fabricated aluminum panels with double glass (6 - 12 - 6 mm) (Outer Glass should be Tempered)				
8.2.1.1	Provide new aluminum double glazed window & door panel ***Rate or Lump Sum in Words:***	№			
8.2.1.4	Replace existing elements by new single glazed aluminum windows (6mm) if the quantity of broken glass does not exceed 30% of whole building ***Rate or Lump Sum in Words:***	№			
8.2.2	**New Aluminum Internal Door** 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. ***Rate or Lump Sum in Words:***	№			
8.2.2.2	Provide new single glazed aluminum partition double leaf door ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
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 ***Rate or Lump Sum in Words:***	№			
8.2.3.1a New Item	Rehabilitate existing Doors ***Rate or Lump Sum in Words:***	№			
8.2.3.2a New Item	Rehabilitate existing aluminum Doors / Windows with all related accessories without Glass ***Rate or Lump Sum in Words:***	№			
	DOOR AND WINDOWS **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9	**FINISHES**				
9.1	**Cement Plaster** 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 9.1.1.1	**Internal and External Plaster Works** 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. ***Rate or Lump Sum in Words:***	m^2			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.1.2	**Repair of Existing Plaster (Internal - External) (Cracks, etc.)**				
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. Fill 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			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2	**Tiling Works (Similar to existing)** 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				
9.2.2 9.2.2.1	**New Glazed Colored Ceramic for Walls** Supply and install glazed colored ceramic for walls Include Ceramic Corner (first choice) ***Rate or Lump Sum in Words:***	m^2			
9.2.4 9.2.4.1	**Repair existing broken floor tiles and skirting (all types) and reinstall by new, similar to existing for all rooms and corridors** 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. ***Rate or Lump Sum in Words:***	LS			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2.4a New Item	**<u>Repair existing broken tiles (all types) and reinstall by new, similar to existing for toilets, drinking Basin and kitchen</u>**				
9.2.4.1a New Item	Rehabilitate and repair all damaged and broken tiles, 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. ***Rate or Lump Sum in Words:***	m²			
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				
9.2.7.2	Type 2: Ceramic ***Rate or Lump Sum in Words:***	m²			
9.2.7.3	Type 3: Mosaic ***Rate or Lump Sum in Words:***	m²			
9.2.7.5	Type 5: Skirting (any type and size) ***Rate or Lump Sum in Words:***	m			
9.2.7.8a New Item	Type 8: Terrazzo ***Rate or Lump Sum in Words:***	m²			
9.2.7.10a New Item	Type 10: Dismantling of the existing Faux parquet, Rehabilitate, Clean and Rub the Existing any type of flooring tiles and skirting ***Rate or Lump Sum in Words:***	m²			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.2.8	**<u>Clean the Existing Decorative Wall Tiles</u>** Rehabilitate any type of decorative wall tiles (mosaic - marble - etc.) Work to include: - All materials and labors - Grouting - Polish and rubbing - All needed items as per the Engineer instruction. - Works to be executed by experts				
9.2.8.4	Type 4: Terrazzo ***Rate or Lump Sum in Words:***	m²			
9.2.9	**<u>Colored PVC for Covered Indoor KG Playgrounds</u>** Supply and install first class safe and antibacterial colored P.V.C. flooring for indoor KG playgrounds at least 6mm thick (Design shape and colors of vinyl flooring should be approved by engineer prior to installation) Work to include: - Shop drawing for design, shape and colors of vinyl flooring should be submitted for each classroom separately for engineer approval - Laminate existing finish flooring after removing vinyl by special concrete material level - Make good and smooth the flooring - Apply self leveling special materials(if needed) to assume Vinyl best finishing - Remove all the existing skirting - Treat the place of the existing skirting - Place the special glue as specified - Place the flooring and screw the skirting P.V.C. profile Labors and materials, screw, etc. All needed items as per the Engineer instructions and approval. <u>Note</u>: Work should be executed by experts and should be executed in presence and approval of supervision engineer and as per required specifications for materials and executions. ***Rate or Lump Sum in Words:***	m²			

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.3	**Suspended Ceilings (Similar to existing)** 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 specifications - 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	**Metal Sheet Strips Suspended Ceilings:**				
9.3.1.2	60 x 60 cm Aluminum Suspended Ceiling ***Rate or Lump Sum in Words:***	m^2			
9.4	**Gypsum Works (Similar to existing)**				
9.4.2	**Rehabilitate Existing Gypsum Suspended Ceiling (Tiles, Panels)**				
9.4.2.1	Rehabilitate existing gypsum board suspended ceiling n the case of damage or during construction. Works to include material, labor, equipment, etc. and to the engineer's approval ***Rate or Lump Sum in Words:***	m^2			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.5	**Painting**				
9.5.1	**Wall and Ceilings Paint Works** 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, ***All paint types must be lead-free and Low VOC (Volatile Organic Compounds)***				
9.5.1.1	Super Rubber Paint for new walls and ceilings ***Rate or Lump Sum in Words:***	m²			
9.5.1.2	Super Rubber Paint for old walls and ceilings ***Rate or Lump Sum in Words:***	m²			
9.5.1.3	Oil Paint for new walls and ceilings ***Rate or Lump Sum in Words:***	m²			
9.5.1.4	Oil Paints for old walls and ceilings ***Rate or Lump Sum in Words:***	m²			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9.5.2	**Outside Walls Paint (Old and New Walls and Ceilings)**				
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. ***Rate or Lump Sum in Words:***	m²			
9.5.6	**Epoxy coating (Playground -covered indoor Car Parking)**				
9.5.6.5a New Item	For Roof ***Rate or Lump Sum in Words:***	m²	50		
	FINISHES **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10	**SPECIALTIES**				
10.1	**Bathrooms Accessories** - 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				
10.1.1 10.1.1.1	**Paper Roller Holder** Supply and install paper holder no rust, no stain stainless steel 316 with all accessories and fixation (anti-rust materials) for good quality and at the places shown on drawings All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	№			
10.1.2 10.1.2.1	**Soap Dispenser** Supply and install stainless steel 316 no rust, no stain, soap dispenser wall type fixation (anti-rust materials and accessories) with all needed items All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	№			
10.1.3 10.1.3.1	**Paper Holder Box** Supply and install paper holder box from stainless steel 316 no rust, no stain, with all needed works and fixation (anti-rust materials and accessories) The box should be from a good manufacturer All works should be done as the Engineer instructions ***Rate or Lump Sum in Words:***	№			
10.1.4	**Mirror for Lavatories** 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 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) ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10.1.5	**<u>Handicapped Bathroom Accessories</u>** - Remove and cart away old damaged fixtures Supply and install all needed bars for the handicapped toilet of stainless steel 316 Work to include: - Materials - Labors - and all needed items as per the Engineer instructions				
10.1.5.1	Supply and install vertical grab rail 60cm bars ***Rate or Lump Sum in Words:***	№			
10.1.5.2	Supply and install Horizontal grab rail 60cm bars ***Rate or Lump Sum in Words:***	№			
10.1.5.3	Supply and install Drop Down Rail removable arm 80cm ***Rate or Lump Sum in Words:***	№			
10.1.5.4	Alarm pull cord for emergency ***Rate or Lump Sum in Words:***	№			
10.1.5.5a New Item	Supply and install partition between urinals similar to existing with all needed fixation accessories ***Rate or Lump Sum in Words:***	№			
10.2	**Classroom Specialties**				
10.2.1 10.2.1.1	**<u>White Teaching Boards</u>** Supply and install White teaching boards from approved manufacturer as per specifications of Ministry of Education and Higher Education and corresponding to the site Cost to include: - (3600mm x 1200mm) final dimensions as per site limitation - Materials and labors - Felt marker pens and eraser (12 marker pens + 2 erases for each white board) - Stainless Steel screws - Remove the existing board - All needed works as per the Engineer instructions ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10.3	**Resin Work**				
10.3.1	**Drinking Basin** 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) ***Rate or Lump Sum in Words:***	№			
10.3.1.7a New Item	Rehabilitation of existing Drinking Basin - Any Length (Traps, Taps, Cleaning and repair of any damaged elements) ***Rate or Lump Sum in Words:***	№			
10.3.4	**Kitchen Counter** 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				
10.3.4.3	Kitchen Counter - Length (1.76 to 2.05 m) ***Rate or Lump Sum in Words:***	№			
10.5	**Internal Curtains** Supply and install internal rolling type tissue and polyester collapsible type curtain as per specifications and at the location as shown on drawings Works to include: - Materials - Labors - Heavy Duty Accessories - All needed works as per the Engineer instructions and approval				
10.5.1	On External Opening ***Rate or Lump Sum in Words:***	m²			
	SPECIALITIES **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
11	**EQUIPMENT**				
	EQUIPMENT **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
12	**FURNISHINGS**				
12.1	**INSTITUTIONAL FURNITURE** Supply and install the following institutional furniture complete including all necessary fixing and accessories, all as specified, shown on the drawings and to the satisfaction of the Engineer.				
12.1.1	**Classrooms Furniture**				
12.1.1.1	Standard desk with chair for classroom, single seat. ***Rate or Lump Sum in Words:***	№			
12.1.2	**Conference Room Furniture**				
12.1.2.1	Standard table. ***Rate or Lump Sum in Words:***	№			
12.1.2.2	Standard chairs. ***Rate or Lump Sum in Words:***	№			
12.1.6 12.1.6.1	**Hooks with Rails for Hats and Coats** Hooks with rails for hats and coats, rail size 120mm high x 20mm thick, softwood, treated and painted, countersunk screwed to wall & painted steel hooks every 200 mm (5№ hooks per linear meter of rail). ***Rate or Lump Sum in Words:***	lm			
	FURNISHINGS **TOTAL CARRIED TO COLLECTION**				

Collection

Page №		Amount (US $)
2.1	SITE PREPARATION AND DEMOLITION	.....
2.2	EXTERNAL WORKS	.....
2.3	CONCRETE	.....
2.4	MASONRY	.....
2.5	METAL WORKS	.....
2.6	WOOD AND PLASTICS	.....
2.7	THERMAL AND MOISTURE PROTECTION	.....
2.8	DOOR AND WINDOWS	.....
2.9	FINISHES	.....
2.10	SPECIALTIES	.....
2.11	EQUIPMENT	.....
2.12	FURNISHINGS	.....
	Total Carried to General Summary	.....

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Bill № 3: Mechanical Engineering Services



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**GENERAL TECHNICAL REQUIREMENTS**				
1.1	**General Mechanical Requirements**				
1.1.1	Revise all Mechanical drawings and make sure that they can be executed properly. ***Rate or Lump Sum in Words:***	Item			
1.2	**Rehabilitation Works General Requirements** 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, floor drains, roof drains, manholes, pumps, WC tanks, adding where applicable all necessary valves, flush valves, etc., and all other necessary works. ***Rate or Lump Sum in Words:***	Item	1		
1.2.2	Maintenance and rehabilitation of existing HVAC & fire fighting systems, including all necessary piping, duct works, pumps and controls, fans, mechanical works inside shafts, air conditioning units, etc. ***Rate or Lump Sum in Words:***	Item			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1.2.3a New Item	Contractor Shall remove existing, newly added showers. Works to include - Removal of fixtures (Shower head or hand) - Replacement of damaged tiles by new one similar to existing. All other nessessary works (Finishes and mechanical works) ***Rate or Lump Sum in Words:***	№	1		
1.2.4a New Item	Contractor Shall remove existing, newly added Water Heater . Works to include - Removal of all pipes and accessories - Replacement of damaged tiles by new one similar to existing. All other nessessary works (Finishes and mechanical works) ***Rate or Lump Sum in Words:***	№			
	GENERAL TECHNICAL REQUIREMENTS **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION**				
2.3	**Drain Cover** Supply and install floor drain cover (P.E) 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 Engineer instructions				
2.3.1	Cover for FCO ***Rate or Lump Sum in Words:***	№			
	SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**WATER PIPE WORK INSTALLATION**				
3.2	**Electrical Water Heater** Electrical water heater as specified and scheduled; include pipe work connections, temperature and pressure gauges, control and power wiring from the MCC, hot water and pipe work connections, control and high limit control valves, isolation and safety valves, thermal insulation, valve boxes, bonding and identification, and the heater should be of a good trade mark of European or west made or first class Lebanese product.				
3.2.2	EWH-02 (100 L) ***Rate or Lump Sum in Words:***	№			
	WATER PIPE WORK INSTALLATION TOTAL CARRIED TO COLLECTION				
4	**FIRE PROTECTION**				
	FIRE PROTECTION TOTAL CARRIED TO COLLECTION				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**SANITARY FIXTURES**				
5.2	**W.C. For Non Kids** 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 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)				
5.2.1	EWC-01 (Wall Hang - 52 x 36 cm) ***Rate or Lump Sum in Words:***	№			
5.2.3a New Item	EWC Accessories (Seat Cover - Flush Tank Cover / Push Button Etc…) ***Rate or Lump Sum in Words:***	№	7		
5.4	**Lavatories for Non Kids** Supply and install semi pedestal wash basin similar to Ideal Standard No. 742001 or approved equal 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) ***Rate or Lump Sum in Words:***	№			
5.4.2	LAV-02 (wall hang, handicapped with mixers 56 x 41 cm) ***Rate or Lump Sum in Words:***	№			
5.4.3a	LAV accessories (Traps - Mixers - Fixation, Etc…) ***Rate or Lump Sum in Words:***	№	2		

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5.5	**Urinal** Supply and installation of high quality urinal units complete with proper wall fixation with anti-dust materials including drainage & water supply connection as per the approved shop drawings. Cost to include all necessary accessories, valves, sensors to provide workable system.				
5.5.1	Urinal ***Rate or Lump Sum in Words:***	№			
5.6	**Self Close Taps on Kids & Students Lavatories** Supply and install self close taps to be fixed in the lavatory body as manufactured by Grohe Item No. 36-173 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 ***Rate or Lump Sum in Words:***	№			
5.7	**Wall Type Self Close Taps on Drinking Basins** Supply and install self close taps to be fixed in the drinking basin body as manufactured by Grohe Item No. 36-176 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 ***Rate or Lump Sum in Words:***	№			
5.8	**Kitchen Sink Accessories** Supply and install kitchen sink accessories such as chrome trap, angle valve, mixers as specified				
5.8.1	Kitchen Sink Accessories ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5.10	**Lavatories Resin Accessories** Supply and install lavatories resin accessories such as chrome trap, angle valves as specified				
5.10.1	Lavatories Resin Accessories ***Rate or Lump Sum in Words:***	№			
5.14	**Hose Bib** Supply and install Hose Bib taps including water connection & all necessary accessories as required				
5.14.1	HB - 01 ***Rate or Lump Sum in Words:***	№	12		
5.14.2a New Item	Maintenace of Potable Water System Contractor shall ensure proper functionality of the system ***Rate or Lump Sum in Words:***	Item			
5.14.3a New Item	Rehabilitation of existing septic tank, including cleaning, crack and joint sealing, waterproofing, replacement of damaged fittings, and all necessary works to restore watertightness and proper operation ***Rate or Lump Sum in Words:***	Item			
	SANITARY FIXTURES **TOTAL CARRIED TO COLLECTION**				

Collection

Page №		Amount (US $)
3.1	GENERAL TECHNICAL REQUIREMENTS	.....
3.2	SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION	.....
3.3	WATER PIPE WORK INSTALLATION	.....
3.4	FIRE PROTECTION	.....
3.5	SANITARY FIXTURES	.....
	Total Carried to General Summary	.....

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Bill № 4: Electrical Engineering Services



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**BASIC ELECTRICAL REQUIREMENTS** 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	**Fixing and Repairing** 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 ***Rate or Lump Sum in Words:***	LS	1		
1.1.2	Wires and cables ***Rate or Lump Sum in Words:***	LS			
1.1.3	Sockets and switches ***Rate or Lump Sum in Words:***	LS	1		
1.1.4	Circuit breakers ***Rate or Lump Sum in Words:***	LS			
1.1.5	Disconnecting switches ***Rate or Lump Sum in Words:***	LS			
	BASIC ELECTRICAL REQUIREMENTS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**PANELBOARDS**				
2.2	**Computer Lab Panel Board (Rehabilitation)**				
2.2.1	Rehabilitate and install the Computer Lab Panel Board, works to include: - Rehabilitation and connection - Wires installation - Accessories - All Accessories Failed Complete to shop drawings and to the satisfaction of the engineer (ready to use) ***Rate or Lump Sum in Words:***	№			
2.3a New Item	Supply and Install New Panel Board Cover ***Rate or Lump Sum in Words:***	№			
	PANELBOARDS **TOTAL CARRIED TO COLLECTION**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**GENERAL LIGHTING INSTALLATIONS**				
3.1	**Lighting Fixtures** 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 φ ≥ 0.9 ***Rate or Lump Sum in Words:***	№			
3.1.2	Replace existing lighting fixtures with C1 ***Rate or Lump Sum in Words:***	№			
3.1.3	TYPE C2: as same as TYPE C1 but Pendent mounted ***Rate or Lump Sum in Words:***	№			
3.1.4	TYPE A2 / A3: 600x600 mm LED Panel 3600lm, 33W, 4000K, 80CRI surface-mount/recessed, die-cast aluminum, IP20 ***Rate or Lump Sum in Words:***	№			
3.1.5	TYPE A1: as same as TYPE A2 but Pendent mounted ***Rate or Lump Sum in Words:***	№			
3.1.6	TYPE N4 / N3: LED - 900lm - 12.5W - 3000K - 80CRI - WW Surface mounted / Recessed Downlight Round - 120 deg ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3.1.7	TYPE F: PLAFONIERA OVAL Wall mounted - IP54 Aluminum die-cast housing IK 06 - CLASS I Lamp SHOULD BE LED 900Lm, 4000K, 17W. ***Rate or Lump Sum in Words:***	№			
3.1.8	TYPE W: A++ / COB LED 3000K 230V CRI 90 - 3955lm - 42W IP65 - IK07 - Die-cast EN AB-47100 aluminum housing with high corrosion resistance. ***Rate or Lump Sum in Words:***	№			
3.1.9	TYPE L (LED): OVAL 18W 516Lm IP54 IK06 FOR LIFT & TECHNICAL SHAFTS. Wall mounted luminaire Aluminum die cast housing in EN AB-47100 (low copper content) with high resistance against corrosion. IK 06 Sand blasted glass diffuser. Lamp fixed position. LOR 43% Isolation: CLASS I. Black (cod.09). Lamp not included. ***Rate or Lump Sum in Words:***	№			
3.1.10	Replace Existing lighting fixtures with TYPE L (LED) ***Rate or Lump Sum in Words:***	№			
3.1.11	TYPE M: LED - 1500lm - 17W - 4000K - 80CRI - Ceiling mounted - With Motion Sensor. ***Rate or Lump Sum in Words:***	№			
3.1.12	Replace Existing lighting fixtures with TYPE M ***Rate or Lump Sum in Words:***	№			
3.1.13	TYPE EM: Ceiling Emergency Ceiling mounted non-maintained 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65. ***Rate or Lump Sum in Words:***	№			

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3.1.14	Replace Existing EM with LED Emergency ***Rate or Lump Sum in Words:***	№			
3.1.15	TYPE EM: Wall Emergency Wall mounted non-maintained, 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65. ***Rate or Lump Sum in Words:***	№			
3.1.16	TYPE EX: Exit sign LED light wall/ceiling mounted maintained, 10w - 450 Lm duration 1.5h, polycarbonate housing IP 65 with engraved letters on fixtures ***Rate or Lump Sum in Words:***	№			
3.1.17	Replace Existing Exit with LED Exits ***Rate or Lump Sum in Words:***	№			
3.1.18	TYPE H: High Bay LED Lightning fixture pendent 100W, 220V, 50Hz. ***Rate or Lump Sum in Words:***	№			
	GENERAL LIGHTING INSTALLATIONS TOTAL CARRIED TO COLLECTION				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
4	**FIRE ALARM SYSTEM**				
	FIRE ALARM SYSTEM **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**DATA SYSTEM**				
	DATA SYSTEM **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
6	**UNINTERRUPTIBLE POWER SUPPLY (UPS)**				
	UNINTERRUPTIBLE POWER SUPPLY (UPS) TOTAL CARRIED TO COLLECTION				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
7	**CCTV SYSTEM** Supply, install, connect and test CCTV system complete with conduits installations from the location of the NVR through the different CCTV camera outlets, including the pull or draw boxes and derivation boxes, the junction and outlet boxes, 19" Rack, and all necessary connections to the management station as shown on drawings as per Tender Specifications and the like to the satisfaction of the supervision engineer.				
7.3a New Item	Replace existing Cameras by new one Similar to existing ***Rate or Lump Sum in Words:***	№			
	CCTV SYSTEM **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
8	**SOLAR SYSTEM**				
8.1	Supply, install, connect and test the solar lighting system for all Electrical Loads (excluding Lifts, Pumps and AC Units) in perfect operating conditions, including but not limited to: - Photovoltaic multi-crystalline solar panels as shown on the drawings. - Hybrid Inverter - All cables, wires, conduits and all necessary accessories - Aluminum PV mountings - The Contractor shall ensure complete solar system which should function as the main Power Supply - The Contractor should submit detailed shop drawings and materials for approval. - For all blocks of the schools - Lithium Batteries for (Off-Grid Solar Types) - All necessary elevated structures on roof and other areas which are needed to install the required solar panel as mentioned on drawings (Sheds, Parking, etc.) areas ***Rate or Lump Sum in Words:***	LS			
8.1.2a	Replace Unfuctional Battery by new one similar to existing				
8.1.2.1a	Deye BOS-G 51.2 kWh High-Voltage $LiFePO_4$ Battery Energy Storage System – Complete Supply, Installation, Testing & Commissioning ***Rate or Lump Sum in Words:***	№			
8.1.2.1b	Deye BOS-GM5.1 HV $LiFePO_4$ Battery, 51.2 V, 100 Ah, 5.12 kWh, including installation, testing and commissioning ***Rate or Lump Sum in Words:***	№			
8.1.2.1c	Acid Battery, 12 V, 250 Ah ***Rate or Lump Sum in Words:***	№			
	SOLAR SYSTEM **TOTAL CARRIED TO COLLECTION**				

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Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
9	**BELL SYSTEM**				
	BELL SYSTEM **TOTAL CARRIED TO COLLECTION**				



Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
10	**LIFTS REHABILITATION**				
10.1	Rehabilitation of the 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: 650kg Speed: 1.5mps Entrance size/ type: 1100 mm wide single speed center opening ***Rate or Lump Sum in Words:***	№			
	LIFTS REHABILITATION **TOTAL CARRIED TO COLLECTION**				

Collection

Page №		Amount (US $)
4.1	BASIC ELECTRICAL REQUIREMENTS	.....
4.2	PANELBOARDS	.....
4.3	GENERAL LIGHTING INSTALLATIONS	.....
4.4	FIRE ALARM SYSTEM	.....
4.5	DATA SYSTEM	.....
4.6	UNINTERRUPTIBLE POWER SUPPLY (UPS)	.....
4.7	CCTV SYSTEM	.....
4.8	SOLAR SYSTEM	.....
4.9	BELL SYSTEM	.....
4.10	LIFTS REHABILITATION	.....
	Total Carried to General Summary	.....

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General Summary
TVET 6-Hosh El Oumara Technical Public School



General Summary

Description	Amount (US $)
Bill № 2: Civil and Architectural Works ……	.....
Bill № 3: Mechanical Engineering Services ……	.....
Bill № 4: 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:

.....

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