



Consulting Engineering Service  
Engineering Services for 35 schools in the West Bank Koica Project Phase 2

Bill of Quantity



**Universal Group for Engineering and Consulting**  
2023

## **1. Introduction**

These Pricing Preambles set out the basis on which the Bills of Quantities have been prepared. Notwithstanding the provisions of these pricing preambles, the Contractor is reminded that the Tender Drawings and the Specifications form part of the Tender Documents and as such mutually refer to the intent of the Tender Documents.

All works included in the Bills of Quantities shall be executed according to the drawings, specifications and engineer's instructions and approval.

## **2. Bills of Quantities**

The Bills of Quantities define the items, which are measurable, and the units of measurement represent the entire work to be carried out in accordance with the Drawings and the Specifications. The measurement items in the Bills of Quantities are to be accepted as the full interpretation of the requirement of the Drawings and Specifications.

"Descriptions" are given in outline only, the Contractor is to refer to the Specifications and Drawings and make himself familiar with the requirements.

No additional measured items will be allowed to interpret further the information so given.

Other requirements which are not measurable in terms of quantity of labor and materials (e.g., specialist supervision, shop drawings, bar bending schedules, as built drawings, samples, tests, mock-ups, maintenance, materials, guarantees and the like) and are not given as specific items in the Bills, are to be included in the prices of the measured items.

The measured items and units of the measurement thus establish the method of measurement for the Contract in the Bills of Quantities. No other measurement method shall be used to measure the executed works.

The same method of measurement and no other will be used in re-measuring the executed work.

the engineer has the right to instruct the contractor to use any item or quantities from any school and use it in other schools for the same prices. the Contractor has no right to object or to claim for any ,money difference.

## **3. Pricing**

The Contractor shall satisfy himself as to the meaning of every item in the Bills of Quantities and the rates and prices inserted by him shall cover all Works required by the Contract Documents. All costs in connection with the proper and successful construction, completion and maintenance of the Works including, but not limited to, completion of all temporary works, furnishing all materials, equipment, supply and appurtenance, providing all construction Plants, equipment, tools, sampling, testing, profits, overheads, charges, provision of guarantees, performing all necessary labor and supervision and other cost of whatsoever nature necessary to fully complete the Works, shall be included in the unit and lump sum prices called for in the bills of Quantities. All Works not specifically set forth as a pay item in the Bills of Quantities shall be considered as subsidiary obligation of the Contractor and all costs in connection therewith shall be included in the Priced Tender.

Prices shall be deemed to include for all straight ranking and circular cutting and consequent waste. All prices shall include fees, levies and taxes such as (VAT). The Contractor shall maintain and keep all item rates and prices fixed throughout the execution of the contract. No extra rates shall be allowed for the changes of specified materials, if required by the Contractor and approved by the Engineer, due to the unavailability of the material or to improve the quality of the same.

#### **4. Quantities**

All estimated quantities stipulated in the Bills of Quantities or other Tender Documents are approximate and are to be used only;

1. as a basis for estimating the probable cost of the Work and
2. For the purpose of comparing the bids submitted for the Work.

The actual amount of work done under each unit price items may differ from the estimated quantities. The basis of payment for work will be the actual quantities. The Contractor agrees that he will make no claim for damages anticipated profits or otherwise on account of any difference between the amounts of work actually executed and the estimated amount.

#### **5. Items in Bills of Quantities**

Such items are the subject of re-measurement after completion in accordance with General Conditions of Contract. Quantities given in the Bills are based upon measurement from the Contract Drawings and Specifications.

#### **6. Measurement**

Metric measurements and weights have been used throughout the Bills of Quantities. Work is measured net as fixed in position and each measurement is taken to the nearest centimeter. Fractions of a centimeter less than half are disregarded and all other fractions are regarded as whole centimeters. This principle shall not apply to dimensions stated in item descriptions. Where minimum deductions of voids are dealt with they refer only to openings or voids which are wholly within the boundaries of measured areas. Openings or voids that are at the boundaries of measured areas are always the subject of deduction irrespective of size.

Rates and Prices shall be clearly spelled out alphabetically and numerically.

No items are to be measured twice under separate headings.

## 7. Descriptions

The order of stating dimensions in descriptions is generally in the sequence of Length, Width and Height. Unless otherwise stated in the Bills of Quantities or herein, all measured items are deemed to include supply and fix in place complete, thus all measured items shall include all incidentals to complete the work in a proper manner such as but not limited to the following:

1. Labor.
2. Materials, including all costs in connection herewith (e.g. conveyance, delivery, unloading, storing, and handling, lowering into position and the like).
3. Customs and import duties as applicable, insurance, levies and the like.
4. All shop treatment of materials (e.g. Preservation of timbers, galvanizing, priming, chrome plating, stove enameling, anodizing and the like, pipe wrapping, coatings, etc.).
5. Fitting and fixing materials in position includes all necessary fixing devices and materials.
6. Commissioning & use of plant.
7. Disposal of waste of material.
8. Square, raking or curved cutting.
9. Work in volumes, areas and length of any size, no separate items being measured for isolated work or work in small quantities, short length, narrow widths, etc.
10. Prices shall be exculding VAT. and are by the currency USD.

Junctions between straight, raking and curved work are in all cases included with the work in which they occur.

Certain items are referenced directly to detail drawings to eliminate detailed description. All such reference includes all work to execute the detail.

Where Specification clauses and / or detail drawing numbers are referred to in a description such information is provided for convenience only and the Contractor is to note that all other relevant Specification requirements and relevant drawings and details are to be taken into account.

## 8. Abbreviations

The following abbreviations are used throughout the Bills of Quantities.

mm Millimeter  
cm Centimeter  
M.R. Linear meter/ Meter Run  
M.S. Square meter  
M.C Cubic Meter  
L.S. Lump Sum  
No. Number  
Kg. Kilogram  
Ref. Reference

## **9. Definitions**

The terms "include", "is included", "including" and similar, are used herein to indicate that the items in question are not measurable as separate items and are not specifically mentioned in the descriptions but the costs of which are to be included in the measured items.

Such references are not comprehensive and are for convenience only and the Contractor is to note that all-relevant requirement of the Specifications and Drawings are to be taken into account in the measured items.

The word "Site" used in the Bills of Quantities means the whole of the areas within the Contract limit lies for this Contract as shown on the Contract Drawings. With reference to the clearance of debris, rubbish, trash, excavated material and the like the definition is extended to include the whole of the site.

The word "ditto" used in the Bills of Quantities means the repetition of all or part of the preceding item as applicable to complete the sense of the item.

The word "extra" used in the Bills of Quantities means the additional cost of the item of work in question over and above the rate of the item as stated in the bills of quantities.

## **10. Protection**

All rates in the Bills of Quantities shall include for protection as required and deemed necessary.

## **11. Shop Drawings / co-ordinated drawings**

All rates shall include where required for producing shop drawings & co-ordinated drawings and supporting calculations.

## **12. As Built Drawings**

All rates shall include where required for producing as-built drawings and supporting calculations.

## **13. Cutting and Patching**

The Contractor shall be responsible for all cutting, patching and making good for all trades for all work and his prices will be deemed to include for all such cutting and patching and making good:

Setting out of the buildings, yards, car parks, guardroom, retaining walls & boundaries are to be done by licensed authorized surveyor at the contractor's expense and responsibility.

## **14. Setting out of Works**

Setting out of the buildings, yards, car-parks, boundaries walls are to be carried out by licensed authorized surveyor at the contractor's expense and responsibility.

## **15. Frame of Wooden Doors**

The frame of the wooden doors items shall be made of Galvanized Steel. The Prices of the Contractor shall consider that. This shall prevail on the drawings or specifications in case of contradictions.

BILLS OF QUANTITY  
Summary of Cost

School Name	Cost (ILS)
1- Izzedin Al Qassam Secondary	
2- Zbouba Secondary Girls Schoo	
3. Jalqamous Elementary Boys Sc	
4. That Al Nitaqain Elementary	
5. Marj Na'jeh Co-ed Secondary	
6. Jericho Preparatory Girls Sc	
7. Ali Bin Abi Taleb Secondary	
8. Marda Secondary Boys School	
9. Qarawa Preparatory Girls Sch	
10. Qarawa Preparatory Boys Sch	
11. Qarawa Boys High School	
12. Al Zawiya Secondary Boys Sc	
13. Deir Ballout Secondary Boys	
14. Far'oun Preparatory Boys Sc	
16. Inshirah Al Daddu Preparato	
18. Al Amin Preparatory Boys Sc	
19. Al Mu'tasem Preparatory Boy	
20. Al Nithamiye Preparatory Gi	
21. Al Saray'a Secondary Boys S	
23. Um Al Shuqhan Preparatory c	
24. Al Zeef Preparatory Boys Sc	
25. Wadi Al Seeq Preparatory Co	
26. Al Tahadi Preparatory co-ed	
27. Al Farouq Preparatory Boys School	
28. Beit Liqya Secondary Girls School	
29. Al Muthalath Preparatory Boys School	
30. Bir Al Basha Secondary Girls School	
31. Fahme co-ed School	
32. Sanur Secondary Boys School	
33. Sirees Preparatory Girls School	
34. Fandaqumiye Secondary Girls School	
39 Biddo Elementary Boys School	
40 Ibn Kahldoun Elementary Boys School	
41 Al Haj Tawfiq Elementary Boys School	
42 Muscat Boys School	

BILLS OF QUANTITIES					
CONSULTANT: Universal Group for Engineering and Consulting			DATE: March 2023		
Izzedin Al Qassam Secondary Boys School					
ITEM No.	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (ILS)	AMOUNT (ILS)
1.1	Preliminary Items				
1.1.1	Supply and installation of the project marble sign (110 cm x 70cm) that include coloured project information. The Contractor shall do the design and fix the sign as per the supervision engineer instructions. The price shall include fixing the sign properly with all required drilling, jumboo bolts, rehabilitation of any damages occurred during fixation.	No.	1		
1.1.2	Demolishing works inside the two WASH facilities (WCs) that intersects with the designed structure in accordance with the drawings. The price shall include demolishing but not limited to all inside partition walls, stalls, floors Tiles, Wall Tiles, electrical wires, lighting Points, Collectors, Sockets, Outlets, toilets, squatting toilets, windows, under tiles sewerage pipes/network, internal water supply network, etc. all as per drawings, and supervision engineer instructions. The price shall also includes demolish or removal of all obstacles, excavation, levelling etc. all as per drawings, and supervision engineer instructions. The price shall include remove all demolished materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
1.1.3	Remove carefully works inside the two WASH facilities (WCs). The price shall include but not limited to remove carefully, main doors, WC doors, sinks, wash basins, lighting Points, Collectors, accessories, taps, etc. all as per drawings, and Engineer instructions. The Contractor shall transport all removed materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
1.1.4	Demolishing works for existing Concrete awnings (slab and columns) in school yard area. The price shall include remove all demolished materials to approved locations outside the schools as per the supervision engineer instructions.	No.	2		
1.1.5	Provisional Items: The Contractor to account for any unexpected works including any necessary demolishing, rubble concrete in excavation, any needed paste and plaster, painting, tiling, panels, demolishing, maintenance for doors, windows, fixing window sills, door thresholds, brick walls, any leakage using appropriate materials and sealant for the roofs shed and sandwich panels, any isolation and insulation, maintenance and covering of electrical wiring, maintenance for mechanical piping and plumping required as per site conditions and engineers instructions and to assure universally accepted safety, acceptable conditions and appropriate aesthetic standards.	L.S	1		
1.2	External Works				
1.2.1	<b>Drinking Fountain Works:</b> Supply and install outside drinking fountain as shown on drawings, rate includes, sink 4.35X0.75m on block stands, the work should be finished and completed to the highest standard. Rate include excavation, B200 R. concrete (all steel reinforcement required), stone works, plastering, glazing tiles, local marble coping, planters and metal cover with all fittings, 8 unit high quality (Class A and approved by Palestine Standards Institution) chrome plated taps of approved kind, rates also include p.v.c. Drainpipe outlet to green area or as per drawings.	L.S	1		
1.2.2	<b>Awning Works</b> Supply and install steel awning at one location or several location as per the detail in the drawing and as per supervision engineer. The price shall also include all steel tubes (columns, horizontal, vertical etc.), steel corrugated sheets, drain gutters, steel bolts, excavation, backfilling, reinforced concrete foundations, reinstatement, 3 Inch galvanized Steel rain water, painting, the fixation, joints, angles and whatever necessary to complete the work in accordance with the drawings, specifications and to the approval of the supervision engineer. Price to include any required works including but not limited to, sealant works, fixing, fastening, welding etc. The Hight of the awning as per drawings or 3.5 meter if not mentioned. The final location or several locations of awning will be fixed during the shop drawing phase and as instructed by the supervision engineer, the Contractor shall not claim for additional cost or object.	m2	12		

1.2.3	<b>Handicap Ramp Works:</b> Supply and Build handicap ramp made from Reinforced Concrete. The price shall include excavation, backfilling, reinstatement, demolish of all obstacles, steel reinforcement, reinforced concrete for ground beam and slab, hollow block wall, 5 cm natural stone tiles, compacted base Corse etc., in accordance with the drawings, details, specifications and to the instructions of the supervision engineer. Handrails of 50mm steel pipes and to include Fixing completely, oil paint three coats in addition to primer coat the hand rails are to be on both sides of the ramp. Price to also include chakered plate, and PVC rubber to the height 2m to the columns. The Contractor to submit shop drawings and details to be approved by the Engineers. Price includes cleaning, plastering and painting the wall adjacent to the newly installed ramp.	L.S	1		
1.2.4	<b>Windows Works #1</b> Remove existing, supply, fix and operate sliding Aluminium Windows extrusion Section 7700 or equal, with protective electrostatic applied polyester powder paint of 70-80 microns. Price to include 6.38mm thick laminated glass (3+0.38+3mm) for double glass. float glazing and all other accessories and fittings to complete works as per drawings and specifications.	M2	16		
1.2.5	<b>Windows Works #2</b> Remove existing, supply, fix Aluminium Windows above doors (non sliding) (20 windows (0.95X0.35m each)) extrusion Section 7700 or equal, with protective electrostatic applied polyester powder paint of 70-80 microns. Price to include 6.38mm thick laminated glass (3+0.38+3mm) for double glass. float glazing and all other accessories and fittings to complete works as per drawings and specifications.	M2	7		
1.2.6	<b>Windows Works #3</b> Remove existing, supply, install and fix steel Windows guarding (Steel plates type). The price shall include all hinges, accessories, ventilation slides opening, painting, locker etc. to complete the works. The type of steel Windows guarding (Steel plates type) similar to what is shown in drawings.	M2	8		
1.3	<b>Construction of New Handicap WASH unit</b>				
<b>A. Civil Works</b>					
1.3.1	Site clearance of any type of stairs, reinforced concrete, trees, branches, rocks, etc. in order to start the work. While keeping the trees intact and safe in order to re-plant the trees in a suitable place in accordance with the supervision engineer and to his approval.	L.S	1.0		
1.3.2	Excavation for foundations and/or ground beam in any kind of soil or rock to the dimensions and levels shown in the drawings. (from N.G.L to bottom of hardcore layer) Price to include removal of extra and unsuitable soil to approved location. The price shall include reinstatement of any damage occurred during excavation. All as per drawings and specifications and supervision instructions.	M3	1.8		
1.3.3	Import and fill with selected Imported Approved Fill; to the required levels and where directed by the Engineer. Filling shall be on layers not to exceed 20cm. thick. Price to include levelling, watering and compacting to 98 % field density and all related works according to drawings and specifications and engineer instructions. The contractor to backfill using excavated soil if suitable or imported approved material.	M3	1.5		
1.3.4	Supply and Well Compact 20cm or 40cm thick Base Coarse as per drawing compacted to min.98% of maximum dry density of modified Proctor, in layers 20cm thick. Price includes levelling, watering, levelling and compacting of ground (sub-base) under base coarse to min. 98% according to Field Density Test. Under foundation	M2	2.0		
1.3.5	Blinding Concrete grade 'B200' With a minimum cement content of 250 Kg. per cubic meter under footings and tie beams and where required, Thickness not less than 10cm thick, should be according to drawings. Price to include all required work according to specifications and drawings and engineer instruction.	M2	2.0		
1.3.6	Supply and Cast Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include shuttering, reinforcing , painting with two coats of hot bitumen (75/25) (for the buried parts) and all related works according to drawings and specifications and engineer instructions. For the foundations	M3	1.5		



1.3.7	Supply and Cast Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include shuttering, reinforcing , painting with two coats of hot bitumen (75/25) (for the buried parts) and all related works according to drawings and specifications and engineer instructions. For the ground beams	M3	2.0		
1.3.8	Supply and Cast Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include shuttering, reinforcing and all related works according to drawings and specifications and engineer instructions. For the columns	M3	0.8		
1.3.9	Supply and Cast 10 cm of Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include shuttering, reinforcing , painting with two coats of hot bitumen (75/25) (for the buried parts) and all related works according to drawings and specifications and engineer instructions. For the slab on grade	M2	9.5		
1.3.10	Supply and Cast 20 cm Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include shuttering, reinforcing , painting with two coats of hot bitumen (75/25) (for the buried parts) and all related works according to drawings and specifications and engineer instructions. For the solid slab including beams and drop beams	M2	9.5		
1.3.11	Supply and Build Concrete Block Walls, 'Grade 35' of any size blocks single or cavity . the measurements will be to one side only all done according to the dwg. specifications and Engineer instructions and approval. Hollow blocks 20 cm thick for the walls of the toilet. Price shall also include Supply and Cast Reinforced Concrete Grade 'B250 With a minimum cement content of 300 Kg. per cubic meter. Price also to include shuttering, reinforcing 4Ø10 and stirrups 1Ø8@25cm, and all related works according to drawings and specifications and engineer instructions. For the beams 20cmX 20cm above Hollow blocks	M <sup>2</sup>	36.0		
1.3.12	supply and install two Coats of Cement and Sand Plaster over one slurry coat to walls and ceilings and where required for External plastering. price include Waterproofing additive (W 290) with the second and last face and painting with standard approved colour Waterproofing supercyl for External walls of the existing structure at the entrance. Price to also include 2 coats of external painting (supercryle). To the toilets.	M <sup>2</sup>	36.0		
1.3.13	Supply and paint three coats polycide paint for ceilings including corridor ceilings of high quality (Approved by Palestine Standards Institution) and by the supervision engineer.	M <sup>2</sup>	10		
1.3.14	Supply and paint high quality emulsion paint, for top walls and internal drop beams (sides and bottom), on one priming coat and two finishing coats, using two coats of complete putty, as per satisfaction of the supervisor engineer.	M <sup>2</sup>	8		
1.3.15	Supply & paint three coats of external quality waterproofing supercyle paint for Corridors (walls) and parapet wall according to drawings and specifications.	M <sup>2</sup>	36		
1.3.16	Supply and Fix Factory-made Steel Doors as per drawings, specification. Price to include frame (door) (as per details), fixing completely, ironmongery, cylinders, cylindrical locks handles (Approved by Palestine Standards Institution). 6 mm. glazing, gaskets, oil Paint in three coats in addition to two primer coats. A 40cm x 40cm sign made of Metal shall be fixed on the door. The sign should be coloured and the icon and writing to be assigned by the supervision engineer, Dimensions: 1m *2.0m	No.	1		

1.3.17	Supply and Install Non-Slip Coloured Ceramic Floor Tiles 0.6 cm Thickness. First choice and free from all defect grade "A". (Approved by Palestine Standards Institution). Price to include sand with cement filling (Grade B-100), pointing with white cement and cleaning on site, removal of the old tiles, levelling and all the necessary work to complete the job in accordance with the instructions of the supervision engineer.	M <sup>2</sup>	7		
1.3.18	Supply and Install White Glazed or coloured Ceramic Wall Tiles 0.6 cm Thickness, First choice European type and free from all defects Grade "A". (Approved by Palestine Standards Institution). Price to include white round aluminium edges patching around services. Two coats of epoxy pointing ..All works shall be in accordance with drawings and specifications.	M <sup>2</sup>	24		
1.3.19	Supply, fix and operate non sliding Aluminium Windows extrusion Section 7700 or equal, with protective electrostatic applied polyester powder paint of 70-80 microns. Price to include 6.38mm thick laminated glass (3+0.38+3mm) for double glass. float glazing and all other accessories and fittings to complete works as per drawings and specifications. Dimensions of 0.7X 0.6 m Price shall include the steel protection from outside made of steel frame and steel wire mesh. Price shall also include painting, fixing etc.	No.	1		
1.3.20	Supply and apply app waterproofing membrane of bitumen rolls. (4 mm. of reinforced polyester sheets) covered with layer of white chipping, over roof slab and around parapets with overlaps of not less than 10 cm. Price to include primer coats of approval source according to specifications and engineer's instructions.	M <sup>2</sup>	8		
1.3.21	Supply and install Local marble threshold for under Doors and under windows 3-4 cm thickness	m2	1		
<b>B. Electrical Works</b>					
	<p>Preamble: All Supplied Materials Should be Local Made (if available), Grade A and Free From Defects, Having Supervisor Certificate From Palestinian Standard Institution (PSI).</p> <p>Price to include submittal and obtaining approval of shop drawings, detailed and as-built drawings for all works as well as coordinating the same with the other services, activities and furniture.</p> <p>Price to include, also, submittal of catalogues and manufacturer instruction. Fixtures and appliances shall be measured in number. Supply and feeder Cables, cable conduits and cable trays shall not be measured but included in DB's prices</p> <p>Manholes, handholds and the like shall be measured in number. All Systems and devices shall be in lump sum including installation, testing and commissioning.</p> <p>Rates of fixtures and appliances shall include installation, wiring, switches and conduit works.</p> <p>All systems equipment (Class A and approved by Palestine Standards Institution)</p>				
1.3.22	<p><b>Lighting points</b></p> <p>Supply, Install and Connect Lighting Points including fire proof boxes fire proof Conduits, fire retardant (E90) 3*1.5 mm2 cables and 5*1.5mm2 for emergency kits, Light Switches, and all accessories as per drawings and specifications. Price to also include any necessary painting or tiling after connecting the points.</p>	SET No.	1		
1.3.23	<p><b>Lighting fixtures</b></p> <p>Supply, Install and Connect the following high frequency control gear Lighting Fixtures including P.F. correction capacitors, Lamps, installation for all lighting fixtures using galvanized iron chains to suspend the fixtures in the ceiling and all accessories as per drawings and specifications. Supply and install Surface mounted Type A or Type B as per drawings</p>	SET No.	1		

1.3.24	<b>Main Electrical Connection</b> Supply, Install and Connect 5x6mm2 XLPE cable include 1Φ1.5" PVC conduit from MDB to the new Unit. Price shall include installation of a new electrical breaker in the main MDB. Price shall also include excavation, any necessary painting, plastering or tiling after connecting the points.	L.M	15		
<b>C. Mechanical Works</b>					
	Preamble. Supply networks pipes To Tanks, or from on roof feeding tanks to collectors shall be priced in Linear meter. Water tanks shall be measured in number. , Sanitary Fixtures shall be measured in number, price to include cold and hot water pipes supply and fittings to collectors, also to include drain supply , fittings connection, to manholes. Drains, Floor Traps, Clean outs and the like shall be measured in number. Internal sanitary sewers network shall be included in the rates of sanitary fixtures and appliances. and the sanitary fixtures includes the cost of poexgol pipes for basins, toilets, science lab basins, home economics basins, ..etc., price also includes the connection to drainage network of these fixtures in sanitary units and labs. Vents and vertical stacks shall measured in linear meter. Manhole, Galleys and the like shall be measured in number. External sewers pipes shall be measured in linear meter for each individual diameter and material. Rates of all fittings , fixtures , appliances and pipe laying shall include:- Supply of material, workmanship, installation, testing and commissioning. Rates to include also all peace's and fittings, including by passes , floats, cleaning outlets , automatic vents, vents and stack covers, valves and non return valves and the like needed to complete works as per specifications. Insulation and painting as called for in specifications. Excavation and cutting for all pipe laying works, bedding back filling and all works connected with pipe laying. All ties, sleeves, joints, tie bolts and rods, brackets and the like. Rates to include Workshops, Coordinated and as- built drawings as approved by the Engineer. , the contractor should submit best quality, approved two brands for each mechanical works items for approval, and should be approved by PSI, any cut in blocks for installations should be done using special cutting machine, (all mechanical materials as sanitary fixtures fixtures, devices should be Italy made, Germany, Spanish made or equivalent )				
1.3.25	Supply and Install White Vitreous Western type handicapped Toilet (Class A and approved by Palestine Standards Institution) Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include Flush tank 6 litter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings, accessories movable handle and fixed handle as shown on drawings and in Specifications. as per specifications , drawing and as directed by supervision Engineer.	Complete Set	1		
1.3.26	Supply and Install White Vitreous China handicapped Wash Basin(sliding type) (Class A and approved by Palestine Standards Institution), size (40 * 56) cm. Complete with all fittings, valves, waste pipes to nearest floor trap, taps or mixer (Class A and approved by Palestine Standards Institution), connection to water distribution, traps, and any other necessary parts as Specification and as directed by Eng. Price includes supplying and installing 40x60cm mirror. Gear tap.	Complete Set	1		
1.3.27	Supply and install 4" galvanized vertical pipes heavy duty for rain water, Local Made or equal and must be approved by Palestine Standard Institution. Price includes digging for pipes, supports, hangers , and all rubber joints and sealants, and rainwater pipe end outlets from roof to ground.	L.M	4		
1.3.28	Heavy duty stainless steel 4" floor drain syphon trap with screw type screen and with closed covers for urinals , all of approved brand , complete with all required fittings and connections using reduced "T" for connecting sanitary fixtures, the traps in stairs to be with closed cover	No	1		

1.3.29	Supply and Install of Precast Concrete Manholes with minimum 15cm wall thickness for sewage and storm water drainage In compliance with specifications and Drawings. Price shall include excavation to any depth according to slopes, B200 reinforced concrete for base, back filling, cement plaster, benching, 8 or 25Ton Cast Iron cover as indicated , drop if needed, and all necessary works. all as shown in drawings, specifications, and approval of supervisor engineer. a. Ø60cm, 8 ton C.I cover	NO.	1		
1.3.30	Supply and install floor cleanout 4" UPVC including stainless steel (sraled type) cover (15*15cm) complete with connection to drain pipes as located in drawings, specifications and approval of supervisor engineer	No.	1		
1.4	<b>Rehabilitation of existing WASH units</b>				
<b>A. Civil Works</b>					
1.4.1	Supply and Build Concrete Block Walls, 'Grade 35' of any size blocks single or cavity. The measurements will be to one side only all done according to the dwg. specifications and Engineer instructions and approval. Hollow blocks 10 cm thick for the partition walls. Price shall also include Supply and Cast Reinforced Concrete Grade 'B250 With a minimum cement content of 300 Kg. per cubic meter. Price also to include shuttering, reinforcing 4Ø10 and stirrups 1Ø8@25cm, and all related works according to drawings and specifications and engineer instructions. For the beams 20cmX 10cm above Hollow blocks	M <sup>2</sup>	55.0		
1.4.2	Supply and paint three coats polycide paint for ceilings including corridor ceilings of high quality (Approved by Palestine Standards Institution) and by the supervision engineer.	M <sup>2</sup>	38		
1.4.3	Supply and paint high quality emulsion paint, for top walls and internal drop beams (sides and bottom), on one priming coat and two finishing coats, using two coats of complete putty, as per satisfaction of the supervisor engineer.	M <sup>2</sup>	55		
1.4.4	Supply and Fix Factory-made Steel Doors as per drawings, specification. Price to include frame (door) (as per details), fixing completely, ironmongery, cylinders, cylindrical locks handles (Approved by Palestine Standards Institution). 6 mm. glazing, gaskets, oil Paint in three coats in addition to two primer coats. A 40cm x 40cm sign made of Metal shall be fixed on the door. The sign should be coloured and the icon and writing to be assigned by the supervision engineer, Dimensions: 1m *2.0m	No.	2		
1.4.5	Supply and Install Non-Slip Coloured Ceramic Floor Tiles 0.6 cm Thickness. First choice and free from all defect grade "A". (Approved by Palestine Standards Institution). Price to include sand with cement filling (Grade B-100), pointing with white cement and cleaning on site, removal of the old tiles, levelling and all the necessary work to complete the job in accordance with the instructions of the supervision engineer.	M <sup>2</sup>	40		
1.4.6	Supply and Install White Glazed or coloured Ceramic Wall Tiles 0.6 cm Thickness, First choice European type and free from all defects Grade "A". (Approved by Palestine Standards Institution). Price to include white round aluminium edges patching around services. Two coats of epoxy pointing ..All works shall be in accordance with drawings and specifications.	M <sup>2</sup>	140		
1.4.7	Supply, fix and operate non sliding Aluminium Windows extrusion Section 7700 or equal, with protective electrostatic applied polyester powder paint of 70-80 microns. Price to include 6.38mm thick laminated glass (3+0.38+3mm) for double glass. float glazing and all other accessories and fittings to complete works as per drawings and specifications. Price shall include the steel protection from outside made of steel frame and steel wire mesh. Price shall also include painting, fixing etc.	M <sup>2</sup>	5		

1.4.8	Supply and install Local marble threshold for under Doors and under windows 3-4 cm thickness. All as per drawings, specifications and supervision engineer.	LS	3		
1.4.9	Supply and Fix Wooden Doors 4.5 cm Thick single or double sashes. With (Frame).(4.5*3.5) cm hardwood (Zan) edging and (3.5*9.5) cm soft wood stile. Edge strip banding of width 4.5 mm. Formica over veneer on both sides, colour for frames and Architrave as directed by engineer. Door paneling to be soft wood 4.5*3.5 cm. each 4 cm, galvanized steel sheet frame of 2mm thick for corridor doors ( as per drawings), width according to the wall thickness' and Allowance of 4 - 6 cm. thickness for plastering and tiling purposes, immersed in wood preservative before erection then embedded completely in sand - cement mortar and completely anchored as per specification. Architrave of Hardwood (Swedish)(4*1.2)cm, price to include ironmongery, kick plates of aluminium 20cm height from one side for main bath room doors, U shaped 10cm height from both sides at the bottom for internal doors kick plates of aluminium 20cm height for bath room doors, U shaped both sides, and at the bottom door stoppers, transparent fiber glass 6mm thick for both upper vision panel & for vision panel inside door leaf, gaskets cylindrical Lock ((Approved by Palestine Standards Institution), and painting in three coats of oil paint in addition to primer coat. Price includes also aluminium louvers of 50x60cm in the bottom for store doors. All as per Detailed Drawings, specification. Size as per drawings	No.	11		
<b>B. Electrical Works</b>					
	<p>Preamble: All Supplied Materials Should be Local Made (if available), Grade A and Free From Defects, Having Supervisor Certificate From Palestinian Standard Institution (PSI).</p> <p>Price to include submittal and obtaining approval of shop drawings, detailed and as-built drawings for all works as well as coordinating the same with the other services, activities and furniture.</p> <p>Price to include, also, submittal of catalogues and manufacturer instruction. Fixtures and appliances shall be measured in number. Supply and feeder Cables, cable conduits and cable trays shall not be measured but included in DB's prices</p> <p>Manholes, handholds and the like shall be measured in number. All Systems and devices shall be in lump sum including installation, testing and commissioning.</p> <p>Rates of fixtures and appliances shall include installation, wiring, switches and conduit works.</p> <p>All systems equipment (Class A and approved by Palestine Standards Institution)</p>				
1.4.10	Sub-distribution boards Supply, Install and Connect the panel Boards factory made oven painted 2mm thickness. Price to include the enclosure, miniature breakers (not less than 10 K.A.cap.) bus bars, 20cm low voltage side and all accessories including feeders XLPE Cables and PVC pipes as Shown on drawings and specifications.				
a.	DBG	LS	1		
b.	MCB 3x32A 10KA to be added in existing MDB include all internal wires to connect the breaker and all accessories to complete the Job.	LS	1		
c.	5x6mm2 XLPE cable include 1Φ1.5" PVC conduit from existing MDB to DBL&DBF	L.M	40		
1.4.11	<b>Lighting points</b> Supply, Install and Connect Lighting Points including fire proof boxes fire proof Conduits, fire retardant (E90) 3*1.5 mm2 cables and 5*1.5mm2 for emergency kits, Light Switches, and all accessories as per drawings and specifications. Price to also include any necessary painting or tiling after connecting the points.	SET No.	8		
1.4.12	<b>Lighting fixtures</b> Supply, Install and Connect the following high frequency control gear Lighting Fixtures including P.F. correction capacitors, Lamps, installation for all lighting fixtures using galvanized iron chains to suspend the fixtures in the ceiling and all accessories as per drawings and specifications. Supply and install 30X120 cm 34W/3700lm LED recessed modular panel with aluminium frame and opal diffuser, colour temp. 4000K UGR<19, IP40	SET No.	8		
<b>C. Mechanical Works</b>					

	<p>Preamble. Supply networks pipes To Tanks, or from on roof feeding tanks to collectors shall be priced in Linear meter. Water tanks shall be measured in number. , Sanitary Fixtures shall be measured in number, price to include cold and hot water pipes supply and fittings to collectors, also to include drain supply , fittings connection, to manholes. Drains, Floor Traps, Clean outs and the like shall be measured in number.</p> <p>Internal sanitary sewers network shall be included in the rates of sanitary fixtures and appliances. and the sanitary fixtures includes the cost of poexgol pipes for basins, toilets, science lab basins, home economics basins, ..etc., price also includes the connection to drainage network of these fixtures in sanitary units and labs. Vents and vertical stacks shall measured in linear meter. Manhole, Galleys and the like shall be measured in number. External sewers pipes shall be measured in linear meter for each individual diameter and material. Rates of all fittings , fixtures , appliances and pipe laying shall include:- Supply of material, workmanship, installation, testing and commissioning. Rates to include also all peace's and fittings, including by passes , floats, cleaning outlets , automatic vents, vents and stack covers, valves and non return valves and the like needed to complete works as per specifications. Insulation and painting as called for in specifications. Excavation and cutting for all pipe laying works, bedding back filling and all works connected with pipe laying. All ties, sleeves, joints, tie bolts and rods, brackets and the like. Rates to include Workshops, Coordinated and as- built drawings as approved by the Engineer. , the contractor should submit best quality, approved two brands for each mechanical works items for approval, and should be approved by PSI, any cut in blocks for installations should be done using special cutting machine, (all mechanical materials as sanitary fixtures fixtures, devices should be Italy made, Germany, Spanish made or equivalent )</p>				
1.4.13	<p>Remove the old Arabic style toilets and supply &amp; Install Porcelain W.C. bowl class "A" white or coloured , (Italy, Spanish made or equivalent) with heavy duty seat and cover. Price includes plastic flush tank, hanging iron steel bracket, bolts and nuts, as well as flexible flush hose , valve, porcelain paper holder, connection to pexogol pipe, connection to drainage and all related materials. Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include complete removal of the old toilets, replacement of any broken tiles, broken valves and then supplying new Flush tank 6 litter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings as per specifications , drawing and as directed by supervision engineer.</p>	Complete Set	11		
1.4.14	<p>Supply &amp; Install Porcelain wall hung wash basin white or coloured engineer of size 50 x 45 cm of approved brand (Italy, Spanish made or equivalent), Price shall include chromium plated mixer with chromium plated handle mounted on wall. the price also includes connection to Pexogol pipe, liquide soap holder , and all fixation and hanging bracket. Price includes supplying and installing 40x60cm mirror., semi pedestal and all other required materials, including connection to drainage system.</p>	Complete Set	6		
1.4.15	<p>Supply and install 3/4" diameter pipe schedule 40 galvanized steel pipes with all necessary fittings such as elbows Tees, unions, air vents, supports, hangers, shields, saddles, plastic tape etc. All piping hung on shafts, or in riser, and in sanitary block are measured in meter run. All pipes imbedded in walls or in site external shall be coated with layers of extruded polyethylene. All pipe joints imbedded in walls shall be coated with thick asphalt layer, all hot water pipes shall be insulated with polyethylene and to be cladded on roof. Price to also include any necessary painting or tiling after connecting the points. The works shall include bring the water from the nearest source.</p>	L.M	25		

<b>1.4.16</b>	Supply and install 6" UPVC pipes SN8 heavy duty, at least (4.9mm) thick, Local Made or equal and must be approved by Palestine Standard Institution, between manholes in with all required materials, sockets, fittings, rubber seals, elbow, etc. The price includes excavation, backfilling of at least 15 cm sand above, below and around the pipes including back-filling of selected material above the sand, and disposal of surplus excavated materials. Excavation shall be to any depth, width, and in any type of soil or rock, connection for internal sewerage network to connect to existing or proposed new sewage network or the septic tank and insulation of septic tank wall after connection.	L.M	0		
<b>1.4.17</b>	Supply, install and test Copper Collectors 3/4" dia., of approved brand. Price shall include all openings (eyes), and shall include for the required copper adaptors, hangers, supports, ties, air vents. Collectors shall be installed on walls, as shown on drawings. The work shall be completed as specified and according to the Engineer's instructions.	eye	28		
<b>1.4.18</b>	Supply and install wall/window type exhaust fans of approved manufacture (European type or equal) complete with self – act automatic shutter. Price includes galvanized ducts, grills, shutter and making necessary holes in walls or glass and fixing, and wiring cables all as per specifications, and approval of supervisor engineer. The fan shall have it is own electrical wiring inside walls or ceiling, one socket/key etc. The price shall include any excavation, painting, plastering etc. all as shown in drawings, specifications, and approval of supervisor engineer. Extract Fan, 100 CFM	No.	7		
<b>1.4.19</b>	Supply and installation and build natural stones from outside and 20cm hollow block from inside to reduce the size and/or split the existing windows as shown on drawings.	L.S	1		
<b>1.4.20</b>	Supply and install floor cleanout 4" UPVC including stainless steel (sraled type) cover (15*15cm) complete with connection to drain pipes as located in drawings, specifications and approval of supervisor engineer	No.	2		
<b>Total Izzedin Al Qassam Secondary Boys School (NIS)</b>					

BILLS OF QUANTITIES					
CONSULTANT: Universal Group for Engineering and Consulting			DATE: March 2023		
Zbouba Secondary Girls School					
ITEM No.	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (ILS)	AMOUNT (ILS)
2.1	Preliminary Items				
2.1.1	Supply and installation of the project marble sign (110 cm x 70cm) that include coloured project information. The Contractor shall do the design and fix the sign as per the supervision engineer instructions. The price shall include fixing the sign properly with all required drilling, jumboo bolts, rehabilitation of any damages occurred during fixation.	No.	1		
2.1.2	Demolishing works inside the WASH facility (WC) that intersects with the designed structure in accordance with the drawings. The price shall include demolishing but not limited to all inside partition walls, stalls, floors Tiles, Wall Tiles, electrical wires, lighting Points, Collectors, Sockets, Outlets, toilets, squatting toilets, windows, under tiles sewerage pipes/network, internal water supply network, etc. all as per drawings, and supervision engineer instructions. The price shall also includes demolish or removal of all obstacles, excavation, levelling etc. all as per drawings, and supervision engineer instructions. The price shall include remove all demolished materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
2.1.3	Remove carefully works inside the WASH facility (WC). The price shall include but not limited to remove carefully, main doors, WC doors, sinks, wash basins, lighting Points, Collectors, accessories, taps, etc. all as per drawings, and Engineer instructions. The Contractor shall transport all removed materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
2.1.4	Demolishing works for existing natural stones, concrete and hollow block wall to extended the WASH facility. The price shall include remove all demolished materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
2.2	External Works				
2.2.1	<b>Awning Works</b> Supply and install steel awning at one location or several location as per the detail in the drawing and as per supervision engineer. The price shall also include all steel tubes (columns, horizontal, vertical etc.), steel corrugated sheets, drain gutters, steel bolts, excavation, backfilling, reinforced concrete foundations, reinstatement, 3 Inch galvanized Steel rain water, painting, the fixation, joints, angles and whatever necessary to complete the work in accordance with the drawings, specifications and to the approval of the supervision engineer. Price to include any required works including but not limited to, sealant works, fixing, fastening, welding etc. The Hight of the awning as per drawings or 3.5 meter if not mentioned. The final location or several locations of awning will be fixed during the shop drawing phase and as instructed by the supervision engineer, the Contractor shall not claim for additional cost or object.	m2	18		
2.2.2	<b>Floor Tiles under the Awning</b> Supply and Install Non-Slip Coloured Ceramic Floor Tiles 0.6 cm Thickness. First choice and free from all defect grade "A". (Approved by Palestine Standards Institution). Price to include sand with cement filling (Grade B-100), pointing with white cement and cleaning on site, removal of the old tiles, levelling and all the necessary work to complete the job in accordance with the instructions of the supervision engineer.	M <sup>2</sup>	18		
2.3	Rehabilitation and Extension of Existing WASH unit				
A. Civil Works					



<b>2.3.1</b>	Site clearance of any type of stairs, reinforced concrete, trees, branches, rocks, etc. in order to start the work. While keeping the trees intact and safe in order to re-plant the trees in a suitable place in accordance with the supervision engineer and to his approval.	L.S	1.0		
<b>2.3.2</b>	Excavation for foundations and/or ground beam in any kind of soil or rock to the dimensions and levels shown in the drawings. (from N.G.L to bottom of hardcore layer) Price to include removal of extra and unsuitable soil to approved location. The price shall include reinstatement of any damage occurred during excavation. All as per drawings and specifications and supervision instructions.	M3	8.0		
<b>2.3.3</b>	Import and fill with selected Imported Approved Fill; to the required levels and where directed by the Engineer. Filling shall be on layers not to exceed 20cm. thick. Price to include levelling, watering and compacting to 98 % field density and all related works according to drawings and specifications and engineer instructions. The contractor to backfill using excavated soil if suitable or imported approved material.	M3	8.5		
<b>2.3.4</b>	Supply and Well Compact 20cm or 40cm thick Base Coarse as per drawing compacted to min.98% of maximum dry density of modified Proctor, in layers 20cm thick. Price includes levelling, watering, levelling and compacting of ground (sub-base) under base coarse to min. 98% according to Field Density Test. Under foundation	M2	8.0		
<b>2.3.5</b>	Blinding Concrete grade 'B200' With a minimum cement content of 250 Kg. per cubic meter under footings and tie beams and where required, Thickness not less than 10cm thick, should be according to drawings. Price to include all required work according to specifications and drawings and engineer instruction.	M2	8.0		
<b>2.3.6</b>	Supply and Cast Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include shuttering, reinforcing , painting with two coats of hot bitumen (75/25) (for the buried parts) and all related works according to drawings and specifications and engineer instructions. For the foundations	M3	1.2		
<b>2.3.7</b>	Supply and Cast Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include shuttering, reinforcing , painting with two coats of hot bitumen (75/25) (for the buried parts) and all related works according to drawings and specifications and engineer instructions. For the ground beams	M3	1.0		
<b>2.3.8</b>	Supply and Cast Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include shuttering, reinforcing and all related works according to drawings and specifications and engineer instructions. For the columns	M3	1.0		
<b>2.3.9</b>	Supply and Cast 10 cm of Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include shuttering, reinforcing , painting with two coats of hot bitumen (75/25) (for the buried parts) and all related works according to drawings and specifications and engineer instructions. For the slab on grade	M2	11.0		
<b>2.3.10</b>	Supply and Cast 20 cm Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include shuttering, reinforcing , painting with two coats of hot bitumen (75/25) (for the buried parts) and all related works according to drawings and specifications and engineer instructions. For the solid slab including beams and drop beams	M2	12.0		

<b>2.3.11</b>	Supply and Build Concrete Block Walls, 'Grade 35' of any size blocks single or cavity . the measurements will be to one side only all done according to the dwg. specifications and Engineer instructions and approval. Hollow blocks 20 cm thick for the walls of the toilet. Price shall also include Supply and Cast Reinforced Concrete Grade 'B250 With a minimum cement content of 300 Kg. per cubic meter. Price also to include shuttering, reinforcing 4Ø10 and stirrups 1Ø8@25cm, and all related works according to drawings and specifications and engineer instructions. For the beams 20cmX 20cm above Hollow blocks	M <sup>2</sup>	30.0		
<b>2.3.12</b>	supply and install two Coats of Cement and Sand Plaster over one slurry coat to walls and ceilings and where required for External plastering. price include Waterproofing additive (W 290) with the second and last face and painting with standard approved colour Waterproofing supercyl for External walls of the existing structure at the entrance. Price to also include 2 coats of external painting (supercryle). To the toilets.	M <sup>2</sup>	48.0		
<b>2.3.13</b>	Supply and paint three coats polycide paint for ceilings including corridor ceilings of high quality (Approved by Palestine Standards Institution) and by the supervision engineer.	M <sup>2</sup>	40.0		
<b>2.3.14</b>	Supply and paint high quality emulsion paint, for top walls and internal drop beams (sides and bottom), on one priming coat and two finishing coats, using two coats of complete putty, as per satisfaction of the supervisor engineer.	M <sup>2</sup>	22.0		
<b>2.3.15</b>	Supply & paint three coats of external quality waterproofing supercyle paint for Corridors (walls) and parapet wall according to drawings and specifications.	M <sup>2</sup>	30.0		
<b>2.3.16</b>	Supply and Fix Factory-made Steel Doors as per drawings, specification. Price to include frame (door) (as per details), fixing completely, ironmongery, cylinders, cylindrical locks handles (Approved by Palestine Standards Institution). 6 mm. glazing, gaskets, oil Paint in three coats in addition to two primer coats. A 40cm x 40cm sign made of Metal shall be fixed on the door. The sign should be coloured and the icon and writing to be assigned by the supervision engineer, Dimensions: 1.2m *2.0m	No.	1.0		
<b>2.3.17</b>	Supply and Install Non-Slip Coloured Ceramic Floor Tiles 0.6 cm Thickness. First choice and free from all defect grade "A". (Approved by Palestine Standards Institution). Price to include sand with cement filling (Grade B-100), pointing with white cement and cleaning on site, removal of the old tiles, levelling and all the necessary work to complete the job in accordance with the instructions of the supervision engineer.	M <sup>2</sup>	40.0		
<b>2.3.18</b>	Supply and Install White Glazed or coloured Ceramic Wall Tiles 0.6 cm Thickness, First choice European type and free from all defects Grade "A". (Approved by Palestine Standards Institution). Price to include white round aluminium edges patching around services. Two coats of epoxy pointing ..All works shall be in accordance with drawings and specifications.	M <sup>2</sup>	140.0		
<b>2.3.19</b>	Supply, fix and operate non sliding Aluminium Windows extrusion Section 7700 or equal, with protective electrostatic applied polyester powder paint of 70-80 microns. Price to include 6.38mm thick laminated glass (3+0.38+3mm) for double glass. float glazing and all other accessories and fittings to complete works as per drawings and specifications. Dimensions of 0.4X 0.6 m and one 1mX1m Price shall include the steel protection from outside made of steel frame and steel wire mesh. Price shall also include painting, fixing etc.	M2	2.0		

2.3.20	Supply and apply app waterproofing membrane of bitumen rolls. (4 mm. of reinforced polyester sheets) covered with layer of white chipping, over roof slab and around parapets with overlaps of not less than 10 cm. Price to include primer coats of approval source according to specifications and engineer's instructions.	M <sup>2</sup>	11.0		
2.3.21	Supply and install Local marble threshold for under Doors and under windows 3-4 cm thickness. All as per drawings, specifications and supervision engineer.	m2	4.0		
2.3.22	Supply and Build Concrete Block Walls, 'Grade 35' of any size blocks single or cavity. The measurements will be to one side only all done according to the dwg. specifications and Engineer instructions and approval. Hollow blocks 10 cm thick for the partition walls. Price shall also include Supply and Cast Reinforced Concrete Grade 'B250 With a minimum cement content of 300 Kg. per cubic meter. Price also to include shuttering, reinforcing 4Ø10 and stirrups 1Ø8@25cm, and all related works according to drawings and specifications and engineer instructions. For the beams 20cmX 10cm above Hollow blocks	M <sup>2</sup>	42.0		
2.3.23	Supply and Fix Wooden Doors 4.5 cm Thick single or double sashes. With (Frame).(4.5*3.5) cm hardwood (Zan) edging and (3.5*9.5) cm soft wood stile. Edge strip banding of width 4.5 mm. Formica over veneer on both sides, colour for frames and Architrave as directed by engineer. Door paneling to be soft wood 4.5*3.5 cm. each 4 cm, galvanized steel sheet frame of 2mm thick for corridor doors ( as per drawings), width according to the wall thickness' and Allowance of 4 - 6 cm. thickness for plastering and tiling purposes, immersed in wood preservative before erection then embedded completely in sand - cement mortar and completely anchored as per specification. Architrave of Hardwood (Swedish)(4*1.2)cm, price to include ironmongery, kick plates of aluminium 20cm height from one side for main bath room doors, U shaped 10cm height from both sides at the bottom for internal doors kick plates of aluminium 20cm height for bath room doors, U shaped both sides, and at the bottom door stoppers, transparent fiber glass 6mm thick for both upper vision panel & for vision panel inside door leaf, gaskets cylindrical Lock ((Approved by Palestine Standards Institution), and painting in three coats of oil paint in addition to primer coat. Price includes also aluminium louvers of 50x60cm in the bottom for store doors. All as per Detailed Drawings, specification. Size as per drawings	No.	9.0		
2.3.24	Supply and Fix Wooden Doors 4.5 cm Thick single or double sashes. With Hardwood (Zan) Frame size (4.5*3.5) cm, and (3.5*9.5) cm soft wood stile. Edge strip banding of width 4.5 mm. Plywood veneer 5mm Thick on both sides. Door paneling to be soft wood 4.5*3.5 cm. each 4 cm., Frame of galvanized steel sheet frame of 2mm thick for corridor doors, width according to the wall thickness' and Allowance of 4 - 6 cm. thickness for plastering and tiling purposes, immersed in wood preservative before erection then embedded completely in sand - cement mortar and completely anchored as per specification. Price to include all the works including ironmongery, cylinders, locks, handles and paint.	No.	1.0		

#### B. Electrical Works

	<p>Preamble: All Supplied Materials Should be Local Made (if available), Grade A and Free From Defects, Having Supervisor Certificate From Palestinian Standard Institution (PSI).</p> <p>Price to include submittal and obtaining approval of shop drawings, detailed and as-built drawings for all works as well as coordinating the same with the other services, activities and furniture.</p> <p>Price to include, also, submittal of catalogues and manufacturer instruction. Fixtures and appliances shall be measured in number. Supply and feeder Cables, cable conduits and cable trays shall not be measured but included in DB's prices</p> <p>Manholes, handholds and the like shall be measured in number. All Systems and devices shall be in lump sum including installation, testing and commissioning.</p> <p>Rates of fixtures and appliances shall include installation, wiring, switches and conduit works.</p> <p>All systems equipment (Class A and approved by Palestine Standards Institution)</p>				
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<b>2.3.25</b>	<b>Lighting points</b> Supply, Install and Connect Lighting Points including fire proof boxes fire proof Conduits, fire retardant (E90) 3*1.5 mm2 cables and 5*1.5mm2 for emergency kits, Light Switches, and all accessories as per drawings and specifications. Price to also include any necessary painting or tiling after connecting the points.	SET No.	7		
<b>2.3.26</b>	<b>Lighting fixtures</b> Supply, Install and Connect the following high frequency control gear Lighting Fixtures including P.F. correction capacitors, Lamps, installation for all lighting fixtures using galvanized iron chains to suspend the fixtures in the ceiling and all accessories as per drawings and specifications. Supply and install Surface mounted Type A or Type B as per drawings	SET No.	7		
<b>2.3.27</b>	Sockets and outlets: Supply, install, numbering and Connect the following Socket Outlets points including cables, conduits, sockets, draw boxes and all accessories up to DB as per drawings and specifications. 3-pin single phase 16 amp sockets waterproof	No.	1		
<b>C. Mechanical Works</b>					
	Preamble. Supply networks pipes To Tanks, or from on roof feeding tanks to collectors shall be priced in Linear meter. Water tanks shall be measured in number. , Sanitary Fixtures shall be measured in number, price to include cold and hot water pipes supply and fittings to collectors, also to include drain supply , fittings connection, to manholes. Drains, Floor Traps, Clean outs and the like shall be measured in number. Internal sanitary sewers network shall be included in the rates of sanitary fixtures and appliances. and the sanitary fixtures includes the cost of poexgol pipes for basins, toilets, science lab basins, home economics basins, ..etc., price also includes the connection to drainage network of these fixtures in sanitary units and labs. Vents and vertical stacks shall measured in linear meter. Manhole, Galleys and the like shall be measured in number. External sewers pipes shall be measured in linear meter for each individual diameter and material. Rates of all fittings , fixtures , appliances and pipe laying shall include:- Supply of material, workmanship, installation, testing and commissioning. Rates to include also all peace's and fittings, including by passes , floats, cleaning outlets , automatic vents, vents and stack covers, valves and non return valves and the like needed to complete works as per specifications. Insulation and painting as called for in specifications. Excavation and cutting for all pipe laying works, bedding back filling and all works connected with pipe laying. All ties, sleeves, joints, tie bolts and rods, brackets and the like. Rates to include Workshops, Coordinated and as- built drawings as approved by the Engineer. , the contractor should submit best quality, approved two brands for each mechanical works items for approval, and should be approved by PSI, any cut in blocks for installations should be done using special cutting machine, (all mechanical materials as sanitary fixtures fixtures, devices should be Italy made, Germany, Spanish made or equivalent )				
<b>2.3.28</b>	Supply and Install White Vitreous Western type handicapped Toilet (Class A and approved by Palestine Standards Institution) Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include Flush tank 6 litter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings, accessories movable handle and fixed handle as shown on drawings and in Specifications. as per specifications , drawing and as directed by supervision Engineer.	Complete Set	1		

<b>2.3.29</b>	Supply and Install White Vitreous China handicapped Wash Basin(sliding type) (Class A and approved by Palestine Standards Institution), size (40 * 56) cm. Complete with all fittings, valves, waste pipes to nearest floor trap, taps or mixer (Class A and approved by Palestine Standards Institution), connection to water distribution, traps, and any other necessary parts as Specification and as directed by Eng. Price includes supplying and installing 40x60cm mirror. Gear tap.	Complete Set	1		
<b>2.3.30</b>	Supply & Install Porcelain W.C. bowl class "A" white or coloured , (Italy, Spanish made or equivalent) with heavy duty seat and cover. Price includes plastic flush tank, hanging iron steel bracket, bolts and nuts, as well as flexible flush hose , valve, porcelain paper holder, connection to pexogol pipe, connection to drainage and all related materials. Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include complete removal of the old toilets, replacement of any broken tiles, broken valves and then supplying new Flush tank 6 litter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings as per specifications , drawing and as directed by supervision engineer.	Complete Set	9		
<b>2.3.31</b>	Supply & Install Porcelain wall hung wash basin white or coloured engineer of size 50 x 45 cm of approved brand (Italy, Spanish made or equivalent), Price shall include chromium plated mixer with chromium plated handle mounted on wall. the price also includes connection to Pexogol pipe, liquide soap holder , and all fixation and hanging bracket. Price includes supplying and installing 40x60cm mirror., semi pedestal and all other required materials, including connection to drainage system.	Complete Set	4		
<b>2.3.32</b>	Supply and install 4" galvanized vertical pipes heavy duty for rain water, Local Made or equal and must be approved by Palestine Standard Institution. Price includes digging for pipes, supports, hangers , and all rubber joints and sealants, and rainwater pipe end outlets from roof to ground.	L.M	4		
<b>2.3.33</b>	Heavy duty stainless steel 4" floor drain syphon trap with screw type screen and with closed covers for urinals , all of approved brand , complete with all required fittings and connections using reduced "T" for connecting sanitary fixtures, the traps in stairs to be with closed cover	No	2		
<b>2.3.34</b>	Supply and Install of Precast Concrete Manholes with minimum 15cm wall thickness for sewage and storm water drainage In compliance with specifications and Drawings. Price shall include excavation to any depth according to slopes, B200 reinforced concrete for base, back filling, cement plaster, benching, 8 or 25Ton Cast Iron cover as indicated , drop if needed, and all necessary works. all as shown in drawings, specifications, and approval of supervisor engineer. a. Ø60cm, 8 ton C.I cover	NO.	1		
<b>2.3.35</b>	Supply, install and test Copper Collectors 3/4" dia., of approved brand. Price shall include all openings (eyes), and shall include for the required copper adaptors, hangers, supports, ties, air vents. Collectors shall be installed on walls, as shown on drawings. The work shall be completed as specified and according to the Engineer's instructions.	eye	22		

<b>2.3.36</b>	Supply and install wall/window type exhaust fans of approved manufacture (European type or equal) complete with self – act automatic shutter. Price includes galvanized ducts, grills, shutter and making necessary holes in walls or glass and fixing, and wiring cables all as per specifications, and approval of supervisor engineer. The fan shall have it is own electrical wiring inside walls or ceiling, one socket/key etc. The price shall include any excavation, painting, plastering etc. all as shown in drawings, specifications, and approval of supervisor engineer. Extract Fan, 100 CFM	No.	5		
<b>2.3.37</b>	Supply and install floor cleanout 4" UPVC including stainless steel (sraled type) cover (15*15cm) complete with connection to drain pipes as located in drawings, specifications and approval of supervisor engineer	No.	1		
Total Zbouba Secondary Girls School (NIS)					

BILLS OF QUANTITIES					
CONSULTANT: Universal Group for Engineering and Consulting			DATE: March 2023		
Jalqamous Elementary Boys School					
ITEM No.	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (ILS)	AMOUNT (ILS)
3.1	Preliminary Items				
3.1.1	Supply and installation of the project marble sign (110 cm x 70cm) that include coloured project information. The Contractor shall do the design and fix the sign as per the supervision engineer instructions. The price shall include fixing the sign properly with all required drilling, jumboo bolts, rehabilitation of any damages occurred during fixation.	No.	1		
3.1.2	Demolishing works inside the WASH facilities (WCs) that intersects with the designed structure in accordance with the drawings. The price shall include demolishing but not limited to all inside partition walls, stalls, floors Tiles, Wall Tiles, electrical wires, reallocated the main door, windows, lighting Points, Collectors, Sockets, Outlets, toilets, urinals, squatting toilets, windows, under tiles sewerage pipes/network, internal water supply network, etc. all as per drawings, and supervision engineer instructions. The price shall also includes demolish or removal of all obstacles, excavation, levelling etc. all as per drawings, and supervision engineer instructions. The price shall include remove all demolished materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
3.1.3	Remove carefully works inside the WASH facilities (WCs). The price shall include but not limited to remove carefully, main doors, WC doors, sinks, wash basins, lighting Points, Collectors, accessories, taps, etc. all as per drawings, and Engineer instructions. The Contractor shall transport all removed materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
3.1.4	Provisional Items: The Contractor to account for any unexpected works including any necessary demolishing, rubble concrete in excavation, any needed paste and plaster, painting, tiling, panels, demolishing, maintenance for doors, windows, fixing window sills, door thresholds, brick walls, any leakage using appropriate materials and sealant for the roofs shed and sandwich panels, any isolation and insulation, maintenance and covering of electrical wiring, maintenance for mechanical piping and plumbing required as per site conditions and engineers instructions and to assure universally accepted safety, acceptable conditions and appropriate aesthetic standards.	L.S	1		
3.2	External Works				
3.2.1	<b>Drinking Fountain Works:</b> Supply and install outside drinking fountain as shown on drawings, rate includes, sink 8.35X0.75m on block stands, the work should be finished and completed to the highest standard. Rate include excavation, B200 R. concrete (all steel reinforcement required), stone works, plastering, glazing tiles, local marble coping, planters and metal cover with all fittings, 15 unit high quality (Class A and approved by Palestine Standards Institution) chrome plated taps of approved kind, rates also include p.v.c. Drainpipe outlet to green area or as per drawings.	L.S	1		

3.2.2	<p><b>Awning Works</b> Supply and install steel awning at one location or several location as per the detail in the drawing and as per supervision engineer. The price shall also include all steel tubes (columns, horizontal, vertical etc.), steel corrugated sheets, drain gutters, steel bolts, excavation, backfilling, reinforced concrete foundations, reinstatement, 3 Inch galvanized Steel rain water, painting, the fixation, joints, angles and whatever necessary to complete the work in accordance with the drawings, specifications and to the approval of the supervision engineer. Price to include any required works including but not limited to, sealant works, fixing, fastening, welding etc. The Hight of the awning as per drawings or 3.5 meter if not mentioned. The final location or several locations of awning will be fixed during the shop drawing phase and as instructed by the supervision engineer, the Contractor shall not claim for additional cost or object.</p>	m2	25		
3.2.3	<p><b>Handicap Ramp Works:</b> rehabilitation of existing handicap ramp made from Reinforced Concrete. The price shall include 110 cm hight Handrails of 50mm steel pipes and to include Fixing completely, oil paint three coats in addition to primer coat the hand rails are to be on both sides of the ramp. The price shall include rehabilitation of the ramp, surface with natural stones. The Contractor to submit shop drawings and details to be approved by the Engineers. Price includes cleaning, plastering and painting the wall adjacent to the ramp, paint of existing handrail etc. The length of handrail is around 32meter.</p>	L.S	1		
3.2.4	<p><b>Rehabilitation of the Stairs</b> Remove existing, supply, fix and install a new stairs made of marble 3-4 cm thickness (14-17 cmX25-30 cm) complete stairs as per drawings and specifications.</p>	M.L	5		
3.2.5	<p><b>Clean of the sewage system</b> Completely clean the existing sewage system (Manholes and pipes) inside and outside the WASH facility using a proper method (Air pressure or water pressure) complete with all related works. The price shall include the water if water method is used.</p>	L.S	1		
3.2.6	<p><b>Rehabilitation of Existing Manholes Cover</b> Supply and replace the existing manhole covers with 50-60 cm, 25 ton concrete manhole covers.</p>	No.	3		
3.4	<b>Rehabilitation of existing WASH units</b>				
<b>A. Civil Works</b>					
3.4.1	<p>Supply and Build Concrete Block Walls, 'Grade 35' of any size blocks single or cavity. The measurements will be to one side only all done according to the dwg. specifications and Engineer instructions and approval. Hollow blocks 10 cm thick for the partition walls. Price shall also include Supply and Cast Reinforced Concrete Grade 'B250 With a minimum cement content of 300 Kg. per cubic meter. Price also to include shuttering, reinforcing 4Ø10 and stirrups 1Ø8@25cm , and all related works according to drawings and specifications and engineer instructions. For the beams 20cmX 10cm above Hollow blocks</p>	M <sup>2</sup>	15.0		
3.4.2	<p>Supply and paint three coats polycide paint for ceilings including corridor ceilings of high quality (Approved by Palestine Standards Institution) and by the supervision engineer.</p>	M <sup>2</sup>	33		



3.4.3	Supply and paint high quality emulsion paint, for top walls and internal drop beams (sides and bottom), on one priming coat and two finishing coats, using two coats of complete putty, as per satisfaction of the supervisor engineer.	M <sup>2</sup>	20		
3.4.4	Supply & paint three coats of external quality waterproofing supercyle paint for Corridors (walls) and parapet wall according to drawings and specifications.	M <sup>2</sup>	70.0		
3.4.4	Supply and Fix Factory-made Steel Doors as per drawings, specification. Price to include frame (door) (as per details), fixing completely, ironmongery, cylinders, cylindrical locks handles (Approved by Palestine Standards Institution). 6 mm. glazing, gaskets, oil Paint in three coats in addition to two primer coats. A 40cm x 40cm sign made of Metal shall be fixed on the door. The sign should be coloured and the icon and writing to be assigned by the supervision engineer,	No.	4		
3.4.5	Supply and Install Non-Slip Coloured Ceramic Floor Tiles 0.6 cm Thickness. First choice and free from all defect grade "A". (Approved by Palestine Standards Institution). Price to include sand with cement filling (Grade B-100), pointing with white cement and cleaning on site, removal of the old tiles, levelling and all the necessary work to complete the job in accordance with the instructions of the supervision engineer.	M <sup>2</sup>	30		
3.4.6	Supply and Install White Glazed or coloured Ceramic Wall Tiles 0.6 cm Thickness, First choice European type and free from all defects Grade "A". (Approved by Palestine Standards Institution). Price to include white round aluminium edges patching around services. Two coats of epoxy pointing ..All works shall be in accordance with drawings and specifications.	M <sup>2</sup>	115		
3.4.7	Supply, fix and operate non sliding Aluminium Windows extrusion Section 7700 or equal, with protective electrostatic applied polyester powder paint of 70-80 microns. Price to include 6.38mm thick laminated glass (3+0.38+3mm) for double glass. float glazing and all other accessories and fittings to complete works as per drawings and specifications. Price shall include the steel protection from outside made of steel frame and steel wire mesh. Price shall also include painting, fixing etc.	M <sup>2</sup>	3		
3.4.8	Supply and install Local marble threshold for under Doors and under windows 3-4 cm thickness. All as per drawings, specifications and supervision engineer.	m2	9		
<b>B. Electrical Works</b>					
	<p>Preamble: All Supplied Materials Should be Local Made (if available), Grade A and Free From Defects, Having Supervisor Certificate From Palestinian Standard Institution (PSI).</p> <p>Price to include submittal and obtaining approval of shop drawings, detailed and as-built drawings for all works as well as coordinating the same with the other services, activities and furniture.</p> <p>Price to include, also, submittal of catalogues and manufacturer instruction. Fixtures and appliances shall be measured in number. Supply and feeder Cables, cable conduits and cable trays shall not be measured but included in DB's prices</p> <p>Manholes, handholds and the like shall be measured in number. All Systems and devices shall be in lump sum including installation, testing and commissioning.</p> <p>Rates of fixtures and appliances shall include installation, wiring, switches and conduit works.</p> <p>All systems equipment (Class A and approved by Palestine Standards Institution)</p>				

3.4.9	<p><b>Lighting points</b></p> <p>Supply, Install and Connect Lighting Points including fire proof boxes fire proof Conduits, fire retardant (E90) 3*1.5 mm2 cables and 5*1.5mm2 for emergency kits, Light Switches, and all accessories as per drawings and specifications. Price to also include any necessary painting or tiling after connecting the points.</p>	SET No.	6		
3.4.10	<p><b>Lighting fixtures</b></p> <p>Supply, Install and Connect the following high frequency control gear Lighting Fixtures including P.F. correction capacitors, Lamps, installation for all lighting fixtures using galvanized iron chains to suspend the fixtures in the ceiling and all accessories as per drawings and specifications. Supply and install Surface mounted Type A or Type B as per drawings</p>	SET No.	6		
<b>C. Mechanical Works</b>					
	<p>Preamble. Supply networks pipes To Tanks, or from on roof feeding tanks to collectors shall be priced in Linear meter. Water tanks shall be measured in number. , Sanitary Fixtures shall be measured in number, price to include cold and hot water pipes supply and fittings to collectors, also to include drain supply , fittings connection, to manholes. Drains, Floor Traps, Clean outs and the like shall be measured in number.</p> <p>Internal sanitary sewers network shall be included in the rates of sanitary fixtures and appliances. and the sanitary fixtures includes the cost of poexgol pipes for basins, toilets, science lab basins, home economics basins, ..etc., price also includes the connection to drainage network of these fixtures in sanitary units and labs. Vents and vertical stacks shall measured in linear meter. Manhole, Galleys and the like shall be measured in number. External sewers pipes shall be measured in linear meter for each individual diameter and material. Rates of all fittings , fixtures , appliances and pipe laying shall include:- Supply of material, workmanship, installation, testing and commissioning. Rates to include also all peace's and fittings, including by passes , floats, cleaning outlets , automatic vents, vents and stack covers, valves and non return valves and the like needed to complete works as per specifications. Insulation and painting as called for in specifications. Excavation and cutting for all pipe laying works, bedding back filling and all works connected with pipe laying. All ties, sleeves, joints, tie bolts and rods, brackets and the like. Rates to include Workshops, Coordinated and as- built drawings as approved by the Engineer. , the contractor should submit best quality, approved two brands for each mechanical works items for approval, and should be approved by PSI, any cut in blocks for installations should be done using special cutting machine, (all mechanical materials as sanitary fixtures fixtures, devices should be Italy made, Germany, Spanish made or equivalent )</p>				
1.4.11	<p>Remove the old Arabic style toilets and/or supply &amp; Install Porcelain W.C. bowl class "A" white or coloured , (Italy, Spanish made or equivalent) with heavy duty seat and cover. Price includes plastic flush tank, hanging iron steel bracket, bolts and nuts, as well as flexible flush hose , valve, porcelain paper holder, connection to pexogol pipe, connection to drainage and all related materials. Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include complete removal of the old toilets, replacement of any broken tiles, broken valves and then supplying new Flush tank 6 litter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings as per specifications , drawing and as directed by supervision engineer.</p>	Complete Set	9		
1.4.12	<p>Supply &amp; Install Porcelain wall hung wash basin white or coloured engineer of size 50 x 45 cm of approved brand (Italy, Spanish made or equivalent), Price shall include chromium plated mixer with chromium plated handle mounted on wall. the price also includes connection to Pexogol pipe, liquide soap holder , and all fixation and hanging bracket. Price includes supplying and installing 40x60cm mirror., semi pedestal and all other required materials, including connection to drainage system.</p>	Complete Set	6		

1.4.13	Supply and Install White Vitreous Western type handicapped Toilet (Class A and approved by Palestine Standards Institution) Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include Flush tank 6 litter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings, accessories movable handle and fixed handle as shown on drawings and in Specifications. as per specifications , drawing and as directed by supervision Engineer.	Complete Set	1		
1.4.14	Supply and Install White Vitreous China handicapped Wash Basin(sliding type) (Class A and approved by Palestine Standards Institution), size (40 * 56) cm. Complete with all fittings, valves, waste pipes to nearest floor trap, taps or mixer (Class A and approved by Palestine Standards Institution), connection to water distribution, traps, and any other necessary parts as Specification and as directed by Eng. Price includes supplying and installing 40x60cm mirror. Gear tap.	Complete Set	1		
1.4.15	Supply and install 6" UPVC pipes SN8 heavy duty, at least (4.9mm) thick, Local Made or equal and must be approved by Palestine Standard Institution, between manholes in with all required materials, sockets, fittings , rubber seals, elbow, etc. The price includes excavation ,backfilling of at least 15 cm sand above , below and around the pipes including back-filling of selected material above the sand, and disposal of surplus excavated materials. Excavation shall be to any depth, width, and in any type of soil or rock, connection for internal sewerage network to connect to existing or proposed new sewerage network or the septic tank and insulation of septic tank wall after connection.	L.M	35		
1.4.16	Supply, install and test Copper Collectors 3/4" dia., of approved brand. Price shall include all openings (eyes), and shall include for the required copper adaptors, hangers, supports, ties, air vents. Collectors shall be installed on walls, as shown on drawings. The work shall be completed as specified and according to the Engineer's instructions.	eye	24		
1.4.17	Supply and install wall/window type exhaust fans of approved manufacture (European type or equal) complete with self – act automatic shutter. Price includes galvanized ducts, grills, shutter and making necessary holes in walls or glass and fixing, and wiring cables all as per specifications, and approval of supervisor engineer. The fan shall have it is own electrical wiring inside walls or ceiling, one socket/key etc. The price shall include any excavation, painting, plastering etc. all as shown in drawings, specifications, and approval of supervisor engineer. Extract Fan, 100 CFM	No.	7		
1.4.18	Supply and Install Polyethylene White, domestic Water Tank. Capacity 1500 lit. "With Quality approval Tag" Including well painted steel balustrade support , automatic copper float valve, isolating valves, drain valve, fittings, vents, screwed cover, piping and connections till main cold water piping and all accessories; all according to the engineers' instructions and approval, the mounting of the tanks should be according to details including special bracing and flexible connections, painted steel base and what is required to complete the work. The price shall also include Steel structure with 2 meter high to carry the tank safely.	No.	2		

1.4.19	Supply and Install of Precast Concrete Manholes with minimum 15cm wall thickness for sewage and storm water drainage In compliance with specifications and Drawings. Price shall include excavation to any depth according to slopes, B200 reinforced concrete for base, back filling, cement plaster, benching, 8 or 25Ton Cast Iron cover as indicated , drop if needed, and all necessary works. all as shown in drawings, specifications, and approval of supervisor engineer. a. Ø60cm, 8 ton C.I cover	NO.	6		
1.4.20	Supply and install floor cleanout 4" UPVC including stainless steel (sraled type) cover (15*15cm) complete with connection to drain pipes as located in drawings, specifications and approval of supervisor engineer	No.	2		
Total Jalqamous Elementary Boys School (NIS)					

BILLS OF QUANTITIES					
CONSULTANT: Universal Group for Engineering and Consulting			DATE: March 2023		
That Al Nitaqain Elementary Girls School					
ITEM No.	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (ILS)	AMOUNT (ILS)
4.1	Preliminary Items				
4.1.1	Supply and installation of the project marble sign (110 cm x 70cm) that include coloured project information. The Contractor shall do the design and fix the sign as per the supervision engineer instructions. The price shall include fixing the sign properly with all required drilling, jumbo bolts, rehabilitation of any damages occurred during fixation.	No.	1		
4.1.2	Demolishing works inside the WASH facilities (WCs) that intersects with the designed structure in accordance with the drawings. The price shall include demolishing but not limited to all inside partition walls, stalls, floors Tiles, Wall Tiles, electrical wires, lighting Points, Collectors, Sockets, Outlets, toilets, squatting toilets, windows, under tiles sewerage pipes/network, internal water supply network, etc. all as per drawings, and supervision engineer instructions. The price shall also includes demolish or removal of all obstacles, excavation, levelling etc. all as per drawings, and supervision engineer instructions. The price shall include remove all demolished materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
4.1.3	Remove carefully works inside the WASH facilities (WCs). The price shall include but not limited to remove carefully, main doors, WC doors, sinks, wash basins, lighting Points, Collectors, accessories, taps, etc. all as per drawings, and Engineer instructions. The Contractor shall transport all removed materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
4.1.4	Provisional Items: The Contractor to account for any unexpected works including any necessary demolishing, rubble concrete in excavation, any needed paste and plaster, painting, tiling, panels, demolishing, maintenance for doors, windows, fixing window sills, door thresholds, brick walls, any leakage using appropriate materials and sealent for the roofs shed and sandwich panels, any isolation and insulation, maintenance and covering of electrical wiring, maintenance for mechanical piping and plumbing required as per site conditions and engineers instructions and to assure universally accepted safety, acceptable conditions and appropriate aesthetic standards.	L.S	1		
4.2	External Works				
4.2.1	<u>Drinking Fountain Works:</u> Supply and install outside drinking fountain as shown on drawings, rate includes, sink 7.6X0.75m on block stands, the work should be finished and completed to the highest standard. Rate include excavation, B200 R. concrete (all steel reinforcement required), stone works, plastering, glazing tiles, local marble coping, planters and metal cover with all fittings, 14 unit high quality (Class A and approved by Palestine Standards Institution) chrome plated taps of approved kind, rates also include p.v.c. Drainpipe outlet to green area or as per drawings.	L.S	1		

4.2.2	<b>Awning Works</b> Supply and install steel awning at one location or several location as per the detail in the drawing and as per supervision engineer. The price shall also include all steel tubes (columns, horizontal, vertical etc.), steel corrugated sheets, drain gutters, steel bolts, excavation, backfilling, reinforced concrete foundations, reinstatement, 3 Inch galvanized Steel rain water, painting, the fixation, joints, angles and whatever necessary to complete the work in accordance with the drawings, specifications and to the approval of the supervision engineer. Price to include any required works including but not limited to, sealant works, fixing, fastening, welding etc. The Hight of the awning as per drawings or 3.5 meter if not mentioned. The final location or several locations of awning will be fixed during the shop drawing phase and as instructed by the supervision engineer, the Contractor shall not claim for additional cost or object.	m2	25		
4.2.3	<b>Clean of the sewage system</b> Completely clean the existing sewage system (Manholes and pipes) inside and outside the WASH facility using a proper method (Air pressure or water pressure) complete with all related works. The price shall include the water if water method is used.	L.S	1		
4.3	<b>Rehabilitation of existing WASH units</b>				
<b>A. Civil Works</b>					
4.3.1	Supply and Build Concrete Block Walls, 'Grade 35' of any size blocks single or cavity. The measurements will be to one side only all done according to the dwg. specifications and Engineer instructions and approval. Hollow blocks 10 cm thick for the partition walls. Price shall also include Supply and Cast Reinforced Concrete Grade 'B250 With a minimum cement content of 300 Kg. per cubic meter. Price also to include shuttering, reinforcing 4Ø10 and stirrups 1Ø8@25cm, and all related works according to drawings and specifications and engineer instructions. For the beams 20cmX 10cm above Hollow blocks	M <sup>2</sup>	14.0		
4.3.2	Supply and paint three coats polycide paint for ceilings including corridor ceilings of high quality (Approved by Palestine Standards Institution) and by the supervision engineer.	M <sup>2</sup>	25		
4.3.3	Supply and paint high quality emulsion paint, for top walls and internal drop beams (sides and bottom), on one priming coat and two finishing coats, using two coats of complete putty, as per satisfaction of the supervisor engineer.	M <sup>2</sup>	35		
4.3.4	Supply and Fix Factory-made Steel Doors as per drawings, specification. Price to include frame (door) (as per details), fixing completely, ironmongery, cylinders, cylindrical locks handles (Approved by Palestine Standards Institution). 6 mm. glazing, gaskets, oil Paint in three coats in addition to two primer coats. A 40cm x 40cm sign made of Metal shall be fixed on the door. The sign should be coloured and the icon and writing to be assigned by the supervision engineer. Dimensions as per drawings	No.	1		
4.3.5	Supply and Install Non-Slip Coloured Ceramic Floor Tiles 0.6 cm Thickness. First choice and free from all defect grade "A". (Approved by Palestine Standards Institution). Price to include sand with cement filling (Grade B-100), pointing with white cement and cleaning on site, removal of the old tiles, levelling and all the necessary work to complete the job in accordance with the instructions of the supervision engineer.	M <sup>2</sup>	25		

4.3.6	Supply and Install White Glazed or coloured Ceramic Wall Tiles 0.6 cm Thickness., First choice European type and free from all defects Grade "A". (Approved by Palestine Standards Institution). Price to include white round aluminium edges patching around services. Two coats of epoxy pointing ..All works shall be in accordance with drawings and specifications.	M <sup>2</sup>	72		
4.3.7	Supply, fix and operate non sliding Aluminium Windows extrusion Section 7700 or equal, with protective electrostatic applied polyester powder paint of 70-80 microns. Price to include 6.38mm thick laminated glass (3+0.38+3mm) for double glass. float glazing and all other accessories and fittings to complete works as per drawings and specifications. Price shall include the steel protection from outside made of steel frame and steel wire mesh. Price shall also include painting, fixing etc.	M <sup>2</sup>	2.5		
4.3.8	Supply and install Local marble threshold for under Doors and under windows 3-4 cm thickness. All as per drawings, specifications and supervision engineer.	m2	5		
4.3.9	Supply and Fix Wooden Doors 4.5 cm Thick single or double sashes. With (Frame).(4.5*3.5) cm hardwood (Zan) edging and (3.5*9.5) cm soft wood stile. Edge strip banding of width 4.5 mm. Formica over veneer on both sides, colour for frames and Architrave as directed by engineer. Door paneling to be soft wood 4.5*3.5 cm. each 4 cm. galvanized steel sheet frame of 2mm thick for corridor doors ( as per drawings), width according to the wall thickness' and Allowance of 4 - 6 cm. thickness for plastering and tiling purposes, immersed in wood preservative before erection then embedded completely in sand - cement mortar and completely anchored as per specification. Architrave of Hardwood (Swedish)(4*1.2)cm, price to include ironmongery, kick plates of aluminium 20cm height from one side for main bath room doors, U shaped 10cm height from both sides at the bottom for internal doors kick plates of aluminium 20cm height for bath room doors, U shaped both sides, and at the bottom door stoppers, transparent fiber glass 6mm thick for both upper vision panel & for vision panel inside door leaf, gaskets cylindrical Lock ((Approved by Palestine Standards Institution), and painting in three coats of oil paint in addition to primer coat. Price includes also aluminium louvers of 50x60cm in the bottom for store doors. All as per Detailed Drawings, specification. Size as per drawings	No.	7		
4.3.10	Supply and Fix Wooden Doors 4.5 cm Thick single or double sashes. With Hardwood (Zan) Frame size (4.5*3.5) cm, and (3.5*9.5) cm soft wood stile. Edge strip banding of width 4.5 mm. Plywood veneer 5mm Thick on both sides. Door paneling to be soft wood 4.5*3.5 cm. each 4 cm., Frame of galvanized steel sheet frame of 2mm thick, width according to the wall thickness' and Allowance of 4 - 6 cm. thickness for plastering and tiling purposes, immersed in wood preservative before erection then embedded completely in sand - cement mortar and completely anchored as per specification. Price to include all the works including ironmongery, cylinders, locks, handles and paint.	No.	1.0		
<b>B. Electrical Works</b>					
	Preamble: All Supplied Materials Should be Local Made (if available), Grade A and Free From Defects, Having Supervisor Certificate From Palestinian Standard Institution (PSI). Price to include submittal and obtaining approval of shop drawings, detailed and as-built drawings for all works as well as coordinating the same with the other services, activities and furniture. Price to include, also, submittal of catalogues and manufacturer instruction. Fixtures and appliances shall be measured in number. Supply and feeder Cables, cable conduits and cable trays shall not be measured but included in DB's prices Manholes, handholds and the like shall be measured in number. All Systems and devices shall be in lump sum including installation, testing and commissioning. Rates of fixtures and appliances shall include installation, wiring, switches and conduit works. All systems equipment (Class A and approved by Palestine Standards Institution)				

4.3.11	<b>Lighting points</b> Supply, Install and Connect Lighting Points including fire proof boxes fire proof Conduits, fire retardant (E90) 3*1.5 mm2 cables and 5*1.5mm2 for emergency kits, Light Switches, and all accessories as per drawings and specifications. Price to also include any necessary painting or tiling after connecting the points.	SET No.	6		
4.3.12	<b>Lighting fixtures</b> Supply, Install and Connect the following high frequency control gear Lighting Fixtures including P.F. correction capacitors, Lamps, installation for all lighting fixtures using galvanized iron chains to suspend the fixtures in the ceiling and all accessories as per drawings and specifications. Supply and install Surface mounted Type A or Type B as per drawings	SET No.	6		
<b>C. Mechanical Works</b>					
	Preamble. Supply networks pipes To Tanks, or from on roof feeding tanks to collectors shall be priced in Linear meter. Water tanks shall be measured in number. , Sanitary Fixtures shall be measured in number, price to include cold and hot water pipes supply and fittings to collectors, also to include drain supply , fittings connection, to manholes. Drains, Floor Traps, Clean outs and the like shall be measured in number. Internal sanitary sewers network shall be included in the rates of sanitary fixtures and appliances. and the sanitary fixtures includes the cost of poexgol pipes for basins, toilets, science lab basins, home economics basins, ..etc., price also includes the connection to drainage network of these fixtures in sanitary units and labs. Vents and vertical stacks shall measured in linear meter. Manhole, Galleys and the like shall be measured in number. External sewers pipes shall be measured in linear meter for each individual diameter and material. Rates of all fittings , fixtures , appliances and pipe laying shall include:- Supply of material, workmanship, installation, testing and commissioning. Rates to include also all peace's and fittings, including by passes , floats, cleaning outlets , automatic vents, vents and stack covers, valves and non return valves and the like needed to complete works as per specifications. Insulation and painting as called for in specifications. Excavation and cutting for all pipe laying works, bedding back filling and all works connected with pipe laying. All ties, sleeves, joints, tie bolts and rods, brackets and the like. Rates to include Workshops, Coordinated and as- built drawings as approved by the Engineer. , the contractor should submit best quality, approved two brands for each mechanical works items for approval, and should be approved by PSI, any cut in blocks for installations should be done using special cutting machine, (all mechanical materials as sanitary fixtures fixtures, devices should be Italy made, Germany, Spanish made or equivalent )				
4.3.12	Remove the old and supply & Install Porcelain W.C. bowl class "A" white or coloured , (Italy, Spanish made or equivalent) with heavy duty seat and cover. Price includes plastic flush tank, hanging iron steel bracket, bolts and nuts, as well as flexible flush hose , valve, porcelain paper holder, connection to pexogol pipe, connection to drainage and all related materials. Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include complete removal of the old toilets, replacement of any broken tiles, broken valves and then supplying new Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings as per specifications , drawing and as directed by supervision engineer.	Complete Set	6		
4.3.13	Supply & Install Porcelain wall hung wash basin white or coloured engineer of size 50 x 45 cm of approved brand (Italy, Spanish made or equivalent), Price shall include chromium plated mixer with chromium plated handle mounted on wall. the price also includes connection to Pexogol pipe, liquide soap holder , and all fixation and hanging bracket. Price includes supplying and installing 40x60cm mirror., semi pedestal and all other required materials, including connection to drainage system.	Complete Set	4		



<b>4.3.14</b>	Supply and Install White Vitreous Western type handicapped Toilet (Class A and approved by Palestine Standards Institution) Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings, accessories movable handle and fixed handle as shown on drawings and in Specifications. as per specifications , drawing and as directed by supervision Engineer.	Complete Set	1		
<b>4.3.15</b>	Supply and Install White Vitreous China handicapped Wash Basin(sliding type) (Class A and approved by Palestine Standards Institution), size (40 * 56) cm. Complete with all fittings, valves, waste pipes to nearest floor trap, taps or mixer (Class A and approved by Palestine Standards Institution), connection to water distribution, traps, and any other necessary parts as Specification and as directed by Eng. Price includes supplying and installing 40x60cm mirror. Gear tap.	Complete Set	1		
<b>4.3.16</b>	Heavy duty stainless steel 4" floor drain syphon trap with screw type screen and with closed covers for urinals , all of approved brand , complete with all required fittings and connections using reduced "T" for connecting sanitary fixtures, the traps in stairs to be with closed cover	No	1		
<b>4.3.17</b>	Supply and install wall/window type exhaust fans of approved manufacture (European type or equal) complete with self – act automatic shutter. Price includes galvanized ducts, grills, shutter and making necessary holes in walls or glass and fixing, and wiring cables all as per specifications, and approval of supervisor engineer. The fan shall have it is own electrical wiring inside walls or ceiling, one socket/key etc. The price shall include any excavation, painting, plastering etc. all as shown in drawings, specifications, and approval of supervisor engineer. Extract Fan, 100 CFM	No.	4		
<b>Total That Al Nitaqain Elementary Girls School</b>					

BILLS OF QUANTITIES					
CONSULTANT: Universal Group for Engineering and Consulting			DATE: March 2023		
Marj Na'jeh Co-ed Secondary School					
ITEM No.	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (ILS)	AMOUNT (ILS)
5.1	Preliminary Items				
5.1.1	Supply and installation of the project marble sign (110 cm x 70cm) that include coloured project information. The Contractor shall do the design and fix the sign as per the supervision engineer instructions. The price shall include fixing the sign properly with all required drilling, jumbo bolts, rehabilitation of any damages occurred during fixation.	No.	1		
5.1.2	Demolishing works for 32m2 old WASH facility. The price shall include remove carefully of what inside the facility and complete demolish of the units. The Contractor shall transport all removed materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
5.1.3	Carefully Demolish of existing boundary wall (2 walls). The Contractor shall transport all removed materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
5.1.4	Allow for every cost and work to secure access to the site. The price shall include all needed works such (remove any obstacles or walls etc.) to allow access to the site for the Contractor machines and manpower etc.. The Contractor shall reinstate any damage he occurs during implementation and any structure he demolish to its original conditions.	L.S	1		
5.1.5	Demolishing works inside the KG WASH facilities (WCs) that intersects with the designed structure in accordance with the drawings. The price shall include demolishing but not limited to all inside partition walls, stalls, floors Tiles, Wall Tiles, electrical wires, lighting Points, Collectors, Sockets, Outlets, toilets, squatting toilets, windows, under tiles sewerage pipes/network, internal water supply network, etc. all as per drawings, and supervision engineer instructions. The price shall also includes demolish or removal of all obstacles, excavation, levelling etc. all as per drawings, and supervision engineer instructions. The price shall include remove all demolished materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
5.2	External Works				
5.2.1	<b>Drinking Fountain Works:</b> Rehabilitation of existing drinking fountain. The price shall include supply and needed materials to complete the rehabilitation as shown on photos on the drawings, rate includes, replacment of damaged block stands and natural stones or marbel as shown in pictures and as per site, the work should be finished and completed to the highest standard. Rate include repair and paint of all steel frames,hinges, metal angles, lock, repalcment of all ceramic tiles, pvc pipes, and new 12 unit high quality (Class A and approved by Palestine Standards Institution) chrome plated taps of approved kind, rates also include p.v.c. Drainpipe outlet to the nearest manhole. And the accessories and equipment needed to finish the work in accordance with the details and the instructions of the supervision engineer. Price include rehabilitation of natural stones, painting of steels repair of tiles etc.	L.S	1		

5.2.2	<b>Awning Works</b> Supply and install steel awning at one location or several location as per the detail in the drawing and as per supervision engineer. The price shall also include all steel tubes (columns, horizontal, vertical etc.), steel corrugated sheets, drain gutters, steel bolts, excavation, backfilling, reinforced concrete foundations, reinstatement, 3 Inch galvanized Steel rain water, painting, the fixation, joints, angles and whatever necessary to complete the work in accordance with the drawings, specifications and to the approval of the supervision engineer. Price to include any required works including but not limited to, sealant works, fixing, fastening, welding etc. The Hight of the awning as per drawings or 3.5 meter if not mentioned. The final location or several locations of awning will be fixed during the shop drawing phase and as instructed by the supervision engineer, the Contractor shall not claim for additional cost or object.	m2	25		
5.3	<b>Construction of a new WASH Facility</b>				
<b>A. Civil Works</b>					
5.3.1	Site clearance of any type of stairs, reinforced concrete, trees, branches, rocks, etc. in order to start the work. While keeping the trees intact and safe in order to re-plant the trees in a suitable place in accordance with the supervision engineer and to his approval.	LS	1.0		
5.3.2	Excavation for foundations and/or ground beam in any kind of soil or rock to the dimensions and levels shown in the drawings. (from N.G.L to bottom of hardcore layer) Price to include removal of extra and unsuitable soil to approved location. The price shall include reinstatement of any damage occurred during excavation. All as per drawings and specifications and supervision instructions.	M3	90.0		
5.3.3	Import and fill with selected Imported Approved Fill; to the required levels and where directed by the Engineer. Filling shall be on layers not to exceed 20cm. thick. Price to include levelling, watering and compacting to 98 % field density and all related works according to drawings and specifications and engineer instructions. The contractor to backfill using excavated soil if suitable or imported approved material.	M3	5.0		
5.3.4	Supply and Well Compact 40cm thick Base Coarse as per drawing compacted to min.98% of maximum dry density of modified Proctor, in layers 20cm thick. Price includes levelling, watering, levelling and compacting of ground (sub-base) under base coarse to min. 98% according to Field Density Test. Under foundation	M2	88.0		
5.3.5	Blinding Concrete grade 'B200' With a minimum cement content of 250 Kg. per cubic meter under footings and tie beams and where required, Thickness not less than 10cm thick, should be according to drawings. Price to include all required work according to specifications and drawings and engineer instruction.	M2	88.0		
5.3.6	Supply and Cast Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include shuttering, reinforcing, painting with two coats of hot bitumen (75/25) (for the buried parts) and all related works according to drawings and specifications and engineer instructions. For the foundations	M3	30.0		
5.3.7	Supply and Cast Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include shuttering, reinforcing, painting with two coats of hot bitumen (75/25) (for the buried parts) and all related works according to drawings and specifications and engineer instructions. For the ground beams	M3	6.0		
5.3.8	Supply and Cast Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include shuttering, reinforcing and all related works according to drawings and specifications and engineer instructions. For the columns	M3	3.0		

<b>5.3.9</b>	Supply and Cast 10 cm of Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include shuttering, reinforcing , painting with two coats of hot bitumen (75/25) (for the buried parts) and all related works according to drawings and specifications and engineer instructions. For the slab on grade	M2	88.0		
<b>5.3.10</b>	Supply and Cast 20 cm Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include shuttering, reinforcing , painting with two coats of hot bitumen (75/25) (for the buried parts) and all related works according to drawings and specifications and engineer instructions. For the solid slab including beams and drop beams	M2	88.0		
<b>5.3.11</b>	Supply and Build Concrete Block Walls, 'Grade 35' of any size blocks single or cavity . the measurements will be to one side only all done according to the dwg. specifications and Engineer instructions and approval. Hollow blocks 20 cm thick for the walls of the toilet. Price shall also include Supply and Cast Reinforced Concrete Grade 'B250 With a minimum cement content of 300 Kg. per cubic meter. Price also to include shuttering, reinforcing 4Ø10 and stirrups 1Ø8@25cm, and all related works according to drawings and specifications and engineer instructions. For the beams 20cmX 20cm above Hollow blocks	M <sup>2</sup>	100.0		
<b>5.3.12</b>	Supply and Build Concrete Block Walls, 'Grade 35' of any size blocks single or cavity. The measurements will be to one side only all done according to the dwg. specifications and Engineer instructions and approval. Hollow blocks 10 cm thick for the partition walls. Price shall also include Supply and Cast Reinforced Concrete Grade 'B250 With a minimum cement content of 300 Kg. per cubic meter. Price also to include shuttering, reinforcing 4Ø10 and stirrups 1Ø8@25cm ,and all related works according to drawings and specifications and engineer instructions. For the beams 20cmX 10cm above Hollow blocks	M <sup>2</sup>	60.0		
<b>5.3.13</b>	supply and install two Coats of Cement and Sand Plaster over one slurry coat to walls and ceilings and where required for External plastering. price include Waterproofing additive (W 290) with the second and last face and painting with standard approved colour Waterproofing supercyl for External walls of the existing structure at the entrance. Price to also include 2 coats of external painting (supercryle). To the toilets.	M <sup>2</sup>	150.0		
<b>5.3.14</b>	Supply and paint three coats polycide paint for ceilings including corridor ceilings of high quality (Approved by Palestine Standards Institution) and by the supervision engineer.	M <sup>2</sup>	88		
<b>5.3.15</b>	Supply and paint high quality emulsion paint, for top walls and internal drop beams (sides and bottom), on one priming coat and two finishing coats, using two coats of complete putty, as per satisfaction of the supervisor engineer.	M <sup>2</sup>	35		
<b>5.3.16</b>	Supply & paint three coats of external quality waterproofing supercyle paint for Corridors (walls) and parapet wall according to drawings and specifications.	M <sup>2</sup>	115		
<b>5.3.17</b>	Supply and Fix Factory-made Steel Doors as per drawings, specification. Price to include frame ( door) (as per details), ironmongery, cylinders, cylindrical locks handles (Approved by Palestine Standards Institution). 6 mm. glazing, gaskets, oil Paint in three coats in addition to two primer coats. A 40cm x 40cm sign made of Metal shall be fixed on the door. The sign should be coloured and the icon and writing to be assigned by the supervision engineer, Dimensions: as per drawings	No.	5		

5.3.18	Supply and Install Non-Slip Coloured Ceramic Floor Tiles 0.6 cm Thickness. First choice and free from all defect grade "A". (Approved by Palestine Standards Institution). Price to include sand with cement filling (Grade B-100), pointing with white cement and cleaning on site, removal of the old tiles, levelling and all the necessary work to complete the job in accordance with the instructions of the supervision engineer.	M <sup>2</sup>	80		
5.3.19	Supply and Install White Glazed or coloured Ceramic Wall Tiles 0.6 cm Thickness, First choice European type and free from all defects Grade "A". (Approved by Palestine Standards Institution). Price to include white round aluminium edges patching around services. Two coats of epoxy pointing ..All works shall be in accordance with drawings and specifications.	M <sup>2</sup>	220		
5.3.20	Supply and Fix Wooden Doors 4.5 cm Thick single or double sashes. With (Frame)(4.5*3.5) cm hardwood (Zan) edging and (3.5*9.5) cm soft wood stile. Edge strip banding of width 4.5 mm. Formica over veneer on both sides, colour for frames and Architrave as directed by engineer. Door paneling to be soft wood 4.5*3.5 cm. each 4 cm. galvanized steel sheet frame of 2mm thick for corridor doors ( as per drawings), width according to the wall thickness' and Allowance of 4 - 6 cm. thickness for plastering and tiling purposes, immersed in wood preservative before erection then embedded completely in sand - cement mortar and completely anchored as per specification. Architrave of Hardwood (Swedish)(4*1.2)cm, price to include ironmongery, kick plates of aluminium 20cm height from one side for main bath room doors, U shaped 10cm height from both sides at the bottom for internal doors kick plates of aluminium 20cm height for bath room doors, U shaped both sides, and at the bottom door stoppers, transparent fiber glass 6mm thick for both upper vision panel & for vision panel inside door leaf, gaskets cylindrical Lock ((Approved by Palestine Standards Institution), and painting in three coats of oil paint in addition to primer coat. Price includes also aluminium louvers of 50x60cm in the bottom for store doors. All as per Detailed Drawings, specification. Size as per drawings	No.	13		
5.3.21	Supply and Fix Wooden Doors 4.5 cm Thick single or double sashes. With Hardwood (Zan) Frame size (4.5*3.5) cm, and (3.5*9.5) cm soft wood stile. Edge strip banding of width 4.5 mm. Plywood veneer 5mm Thick on both sides. Door paneling to be soft wood 4.5*3.5 cm. each 4 cm. Frame of galvanized steel sheet frame of 2mm thick, width according to the wall thickness' and Allowance of 4 - 6 cm. thickness for plastering and tiling purposes, immersed in wood preservative before erection then embedded completely in sand - cement mortar and completely anchored as per specification. Price to include all the works including ironmongery, cylinders, locks, handles and paint.	No.	1		
5.3.22	Supply, fix and operate non sliding Aluminium Windows extrusion Section 7700 or equal, with protective electrostatic applied polyester powder paint of 70-80 microns. Price to include 6.38mm thick laminated glass (3+0.38+3mm) for double glass. float glazing and all other accessories and fittings to complete works as per drawings and specifications. Price shall include the steel protection from outside made of steel frame and steel wire mesh. Price shall also include painting, fixing etc.	M2	5		
5.3.23	Supply and apply app waterproofing membrane of bitumen rolls. (4 mm. of reinforced polyester sheets) covered with layer of white chipping, over roof slab and around parapets with overlaps of not less than 10 cm. Price to include primer coats of approval source according to specifications and engineer's instructions.	M <sup>2</sup>	90		
5.3.24	Supply and install Local marble threshold for under Doors and under windows 3-4 cm thickness	m2	10		

B. Electrical Works					
	<p>Preamble: All Supplied Materials Should be Local Made (if available), Grade A and Free From Defects, Having Supervisor Certificate From Palestinian Standard Institution (PSI).</p> <p>Price to include submittal and obtaining approval of shop drawings, detailed and as-built drawings for all works as well as coordinating the same with the other services, activities and furniture.</p> <p>Price to include, also, submittal of catalogues and manufacturer instruction.</p> <p>Fixtures and appliances shall be measured in number. Supply and feeder Cables, cable conduits and cable trays shall not be measured but included in DB's prices</p> <p>Manholes, handholds and the like shall be measured in number. All Systems and devices shall be in lump sum including installation, testing and commissioning.</p> <p>Rates of fixtures and appliances shall include installation, wiring, switches and conduit works.</p> <p>All systems equipment (Class A and approved by Palestine Standards Institution)</p>				
5.3.24	<p><b>Lighting points</b></p> <p>Supply, Install and Connect Lighting Points including fire proof boxes fire proof Conduits, fire retardant (E90) 3*1.5 mm2 cables and 5*1.5mm2 for emergency kits, Light Switches, and all accessories as per drawings and specifications. Price to also include any necessary painting or tiling after connecting the points.</p>	SET No.	8		
5.3.25	<p><b>Lighting fixtures</b></p> <p>Supply, Install and Connect the following high frequency control gear Lighting Fixtures including P.F. correction capacitors, Lamps, installation for all lighting fixtures using galvanized iron chains to suspend the fixtures in the ceiling and all accessories as per drawings and specifications. Supply and install Surface mounted Type A or Type B as per drawings</p>	SET No.	8		
5.3.26	<p>Sub-distribution boards</p> <p>Supply, Install and Connect the panel Boards factory made oven painted 2mm thickness. Price to include the enclosure, miniature breakers (not less than 10 K.A.cap.) bus bars, 20cm low voltage side and all accessories including feeders XLPE Cables and PVC pipes as Shown on drawings and specifications.</p>				
A.	DBG	LS	1		
B.	MCB 3x32A 10KA to be added in existing MDB include all internal wires to connect the breaker and all accessories to complete the Job.	LS	1		
C.	5x6mm2 XLPE cable include 1 Φ1.5" PVC conduit from existing MDB to DBL&DBF	L.M	35		
C. Mechanical Works					

	<p>Preamble. Supply networks pipes To Tanks, or from on roof feeding tanks to collectors shall be priced in Linear meter. Water tanks shall be measured in number. , Sanitary Fixtures shall be measured in number, price to include cold and hot water pipes supply and fittings to collectors, also to include drain supply , fittings connection, to manholes. Drains, Floor Traps, Clean outs and the like shall be measured in number.</p> <p>Internal sanitary sewers network shall be included in the rates of sanitary fixtures and appliances. and the sanitary fixtures includes the cost of poexgol pipes for basins, toilets, science lab basins, home economics basins, ..etc., price also includes the connection to drainage network of these fixtures in sanitary units and labs. Vents and vertical stacks shall measured in linear meter. Manhole, Galleys and the like shall be measured in number. External sewers pipes shall be measured in linear meter for each individual diameter and material. Rates of all fittings , fixtures , appliances and pipe laying shall include:- Supply of material, workmanship, installation, testing and commissioning. Rates to include also all peace's and fittings, including by passes , floats, cleaning outlets , automatic vents, vents and stack covers, valves and non return valves and the like needed to complete works as per specifications. Insulation and painting as called for in specifications. Excavation and cutting for all pipe laying works, bedding back filling and all works connected with pipe laying. All ties, sleeves, joints, tie bolts and rods, brackets and the like. Rates to include Workshops, Coordinated and as- built drawings as approved by the Engineer. , the contractor should submit best quality, approved two brands for each mechanical works items for approval, and should be approved by PSI, any cut in blocks for installations should be done using special cutting machine, (all mechanical materials as sanitary fixtures fixtures, devices should be Italy made, Germany, Spanish made or equivalent )</p>				
5.3.27	<p>Supply &amp; Install Porcelain W.C. bowl class "A" white or coloured , (Italy, Spanish made or equivalent) with heavy duty seat and cover. Price includes plastic flush tank, hanging iron steel bracket, bolts and nuts, as well as flexible flush hose , valve, porcelain paper holder, connection to pexogol pipe, connection to drainage and all related materials. Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include supplying new Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings as per specifications , drawing and as directed by supervision engineer.</p>	Complete Set	13		
5.3.28	<p>Supply &amp; Install Porcelain wall hung wash basin white or coloured engineer of size 50 x 45 cm of approved brand (Italy, Spanish made or equivalent), Price shall include chromium plated mixer with chromium plated handle mounted on wall. the price also includes connection to Pexogol pipe, liquide soap holder , and all fixation and hanging bracket. Price includes supplying and installing 40x60cm mirror., semi pedestal and all other required materials, including connection to drainage system.</p>	Complete Set	9		
5.3.29	<p>Supply and Install White Vitreous Western type handicapped Toilet (Class A and approved by Palestine Standards Institution) Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings, accessories movable handle and fixed handle as shown on drawings and in Specifications. as per specifications , drawing and as directed by supervision Engineer.</p>	Complete Set	1		

5.3.30	Supply and Install White Vitreous China handicapped Wash Basin (Class A and approved by Palestine Standards Institution), size (40 * 56) cm. Complete with all fittings, valves, waste pipes to nearest floor trap, taps or mixer (Class A and approved by Palestine Standards Institution), connection to water distribution, traps, and any other necessary parts as Specification and as directed by Eng. Price includes supplying and installing 40x60cm mirror. Gear tap.	Complete Set	1		
5.3.31	Supply and install 6" UPVC pipes SN8 heavy duty, at least (4.9mm) thick, Local Made or equal and must be approved by Palestine Standard Institution, between manholes in with all required materials, sockets, fittings, rubber seals, elbow, etc. The price includes excavation, backfilling of at least 15 cm sand above, below and around the pipes including back-filling of selected material above the sand, and disposal of surplus excavated materials. Excavation shall be to any depth, width, and in any type of soil or rock, connection for internal sewerage network to connect to existing or proposed new sewage network or the septic tank and insulation of septic tank wall after connection.	L.M	35		
5.3.34	Supply and install 3" galvanized vertical pipes heavy duty for rain water, Local Made or equal and must be approved by Palestine Standard Institution. Price includes digging for pipes, supports, hangers, and all rubber joints and sealants, and rainwater pipe end outlets from roof to ground.	L.M	8		
5.3.35	Heavy duty stainless steel 4" floor drain syphon trap with screw type screen and with closed covers for urinals, all of approved brand, complete with all required fittings and connections using reduced "T" for connecting sanitary fixtures, the traps in stairs to be with closed cover	No	5		
5.3.36	Supply and Install of Precast Concrete Manholes with minimum 15cm wall thickness for sewage and storm water drainage In compliance with specifications and Drawings. Price shall include excavation to any depth according to slopes, B200 reinforced concrete for base, back filling, cement plaster, benching, 8 or 25Ton Cast Iron cover as indicated, drop if needed, and all necessary works. all as shown in drawings, specifications, and approval of supervisor engineer. a. Ø60cm, 8 ton C.I cover	NO.	8		
5.3.37	Supply and install wall/window type exhaust fans of approved manufacture (European type or equal) complete with self – act automatic shutter. Price includes galvanized ducts, grills, shutter and making necessary holes in walls or glass and fixing, and wiring cables all as per specifications, and approval of supervisor engineer. The fan shall have it is own electrical wiring inside walls or ceiling, one socket/key etc. The price shall include any excavation, painting, plastering etc. all as shown in drawings, specifications, and approval of supervisor engineer. Extract Fan, 100 CFM	No.	6		
5.3.38	Supply and Install Polyethylene White, domestic Water Tank. Capacity 1500 lit. "With Quality approval Tag" Including well painted steel balustrade support, automatic copper float valve, isolating valves, drain valve, fittings, vents, screwed cover, piping and connections till main cold water piping and all accessories; all according to the engineers' instructions and approval, the mounting of the tanks should be according to details including special bracing and flexible connections, painted steel base and what is required to complete the work. The price shall also include Steel structure with 2 meter high to carry the tank safely.	No.	3		



5.3.39	Supply, install and test Copper Collectors 3/4" dia., of approved brand. Price shall include all openings (eyes), and shall include for the required copper adaptors, hangers, supports, ties, air vents. Collectors shall be installed on walls, as shown on drawings. The work shall be completed as specified and according to the Engineer's instructions.	eye	39		
5.4	Rehabilitation of existing KG WASH units				
<b>A. Civil Works</b>					
5.4.1	Supply and Build Concrete Block Walls, 'Grade 35' of any size blocks single or cavity. The measurements will be to one side only all done according to the dwg. specifications and Engineer instructions and approval. Hollow blocks 10 cm thick for the partition walls. Price shall also include Supply and Cast Reinforced Concrete Grade 'B250 With a minimum cement content of 300 Kg. per cubic meter. Price also to include shuttering, reinforcing 4Ø10 and stirrups 1Ø8@25cm, painting with two coats of hot bitumen (75/25) (for the buried parts) and all related works according to drawings and specifications and engineer instructions. For the beams 20cmX 10cm above Hollow blocks	M <sup>2</sup>	13.0		
5.4.2	Supply and paint three coats polycide paint for ceilings including corridor ceilings of high quality (Approved by Palestine Standards Institution) and by the supervision engineer.	M <sup>2</sup>	18		
5.4.3	Supply and paint high quality emulsion paint, for top walls and internal drop beams (sides and bottom), on one priming coat and two finishing coats, using two coats of complete putty, as per satisfaction of the supervisor engineer.	M <sup>2</sup>	12		
5.4.4	Supply and Fix Factory-made Steel Doors as per drawings, specification. Price to include frame (door) (as per details), fixing completely, ironmongery, cylinders, cylindrical locks handles (Approved by Palestine Standards Institution). 6 mm. glazing, gaskets, oil Paint in three coats in addition to two primer coats. A 40cm x 40cm sign made of Metal shall be fixed on the door. The sign should be coloured and the icon and writing to be assigned by the supervision engineer,	No.	1		
5.4.5	Supply and Install Non-Slip Coloured Ceramic Floor Tiles 0.6 cm Thickness. First choice and free from all defect grade "A". (Approved by Palestine Standards Institution). Price to include sand with cement filling (Grade B-100), pointing with white cement and cleaning on site, removal of the old tiles, levelling and all the necessary work to complete the job in accordance with the instructions of the supervision engineer.	M <sup>2</sup>	18		
5.4.7	Supply and Install White Glazed or coloured Ceramic Wall Tiles 0.6 cm Thickness., First choice European type and free from all defects Grade "A". (Approved by Palestine Standards Institution). Price to include white round aluminium edges patching around services. Two coats of epoxy pointing ..All works shall be in accordance with drawings and specifications.	M <sup>2</sup>	50		
5.4.8	Supply, fix and operate non sliding Aluminium Windows extrusion Section 7700 or equal, with protective electrostatic applied polyester powder paint of 70-80 microns. Price to include 6.38mm thick laminated glass (3+0.38+3mm) for double glass. float glazing and all other accessories and fittings to complete works as per drawings and specifications. Price shall include the steel protection from outside made of steel frame and steel wire mesh. Price shall also include painting, fixing etc.	M <sup>2</sup>	3		
5.4.9	Supply and install Local marble threshold for under Doors and under windows 3-4 cm thickness. All as per drawings, specifications and supervision engineer.	m2	3		

5.4.10	Supply and apply app waterproofing membrane of bitumen rolls. (4 mm. of reinforced polyester sheets) covered with layer of white chipping, over roof slab and around parapets with overlaps of not less than 10 cm. Price to include primer coats of approval source according to specifications and engineer's instructions.	M <sup>2</sup>	18		
5.4.11	Allow for every cost and work and open a new windows as shown on drawings. All as per instructions, drawings and supervision engineer.	L.S	1		
5.4.12	Supply and Fix Wooden Doors 4.5 cm Thick single or double sashes. With (Frame).(4.5*3.5) cm hardwood (Zan) edging and (3.5*9.5) cm soft wood stile. Edge strip banding of width 4.5 mm. Formica over veneer on both sides, colour for frames and Architrave as directed by engineer. Door paneling to be soft wood 4.5*3.5 cm. each 4 cm. galvanized steel sheet frame of 2mm thick for corridor doors ( as per drawings), width according to the wall thickness' and Allowance of 4 - 6 cm. thickness for plastering and tiling purposes, immersed in wood preservative before erection then embedded completely in sand - cement mortar and completely anchored as per specification. Architrave of Hardwood (Swedish)(4*1.2)cm, price to include ironmongery, kick plates of aluminium 20cm height from one side for main bath room doors, U shaped 10cm height from both sides at the bottom for internal doors kick plates of aluminium 20cm height for bath room doors, U shaped both sides, and at the bottom door stoppers, transparent fiber glass 6mm thick for both upper vision panel & for vision panel inside door leaf, gaskets cylindrical Lock ((Approved by Palestine Standards Institution), and painting in three coats of oil paint in addition to primer coat. Price includes also aluminium louvers of 50x60cm in the bottom for store doors. All as per Detailed Drawings, specification. Size as per drawings	No.	4		
<b>B. Electrical Works</b>					
	<p>Preamble: All Supplied Materials Should be Local Made (if available), Grade A and Free From Defects, Having Supervisor Certificate From Palestinian Standard Institution (PSI).</p> <p>Price to include submittal and obtaining approval of shop drawings, detailed and as-built drawings for all works as well as coordinating the same with the other services, activities and furniture.</p> <p>Price to include, also, submittal of catalogues and manufacturer instruction. Fixtures and appliances shall be measured in number. Supply and feeder Cables, cable conduits and cable trays shall not be measured but included in DB's prices</p> <p>Manholes, handholds and the like shall be measured in number. All Systems and devices shall be in lump sum including installation, testing and commissioning.</p> <p>Rates of fixtures and appliances shall include installation, wiring, switches and conduit works.</p> <p>All systems equipment (Class A and approved by Palestine Standards Institution)</p>				
5.4.11	<p><b>Lighting points</b></p> <p>Supply, Install and Connect Lighting Points including fire proof boxes fire proof Conduits, fire retardant (E90) 3*1.5 mm2 cables and 5*1.5mm2 for emergency kits, Light Switches, and all accessories as per drawings and specifications. Price to also include any necessary painting or tiling after connecting the points.</p>	SET No.	2		
5.4.12	<p><b>Lighting fixtures</b></p> <p>Supply, Install and Connect the following high frequency control gear Lighting Fixtures including P.F. correction capacitors, Lamps, installation for all lighting fixtures using galvanized iron chains to suspend the fixtures in the ceiling and all accessories as per drawings and specifications. Supply and install Surface mounted Type A or Type B as per drawings</p>	SET No.	2		
<b>C. Mechanical Works</b>					

	<p>Preamble. Supply networks pipes To Tanks, or from on roof feeding tanks to collectors shall be priced in Linear meter. Water tanks shall be measured in number. , Sanitary Fixtures shall be measured in number, price to include cold and hot water pipes supply and fittings to collectors, also to include drain supply , fittings connection, to manholes. Drains, Floor Traps, Clean outs and the like shall be measured in number.</p> <p>Internal sanitary sewers network shall be included in the rates of sanitary fixtures and appliances. and the sanitary fixtures includes the cost of poexgol pipes for basins, toilets, science lab basins, home economics basins, ..etc., price also includes the connection to drainage network of these fixtures in sanitary units and labs. Vents and vertical stacks shall measured in linear meter. Manhole, Galleys and the like shall be measured in number. External sewers pipes shall be measured in linear meter for each individual diameter and material. Rates of all fittings , fixtures , appliances and pipe laying shall include:- Supply of material, workmanship, installation, testing and commissioning. Rates to include also all peace's and fittings, including by passes , floats, cleaning outlets , automatic vents, vents and stack covers, valves and non return valves and the like needed to complete works as per specifications. Insulation and painting as called for in specifications. Excavation and cutting for all pipe laying works, bedding back filling and all works connected with pipe laying. All ties, sleeves, joints, tie bolts and rods, brackets and the like. Rates to include Workshops, Coordinated and as- built drawings as approved by the Engineer. , the contractor should submit best quality, approved two brands for each mechanical works items for approval, and should be approved by PSI, any cut in blocks for installations should be done using special cutting machine, (all mechanical materials as sanitary fixtures fixtures, devices should be Italy made, Germany, Spanish made or equivalent )</p>				
5.4.13	<p>Remove the old toilets and/or supply &amp; Install KG Porcelain W.C. bowl class "A" white or coloured , (Italy, Spanish made or equivalent) with heavy duty seat and cover. Price includes plastic flush tank, hanging iron steel bracket, bolts and nuts, as well as flexible flush hose , valve, porcelain paper holder, connection to pexogol pipe, connection to drainage and all related materials. Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include complete removal of the old toilets, replacement of any broken tiles, broken valves and then supplying new Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings as per specifications , drawing and as directed by supervision engineer.</p>	Complete Set	2		
5.4.14	<p>Supply &amp; Install kg Porcelain wall hung wash basin white or coloured engineer of approved brand (Italy, Spanish made or equivalent), Price shall include chromium plated mixer with chromium plated handle mounted on wall. the price also includes connection to Pexogol pipe, liquide soap holder , and all fixation and hanging bracket. Price includes supplying and installing 40x60cm mirror., semi pedestal and all other required materials, including connection to drainage system.</p>	Complete Set	1		
5.4.15	<p>Supply, install and test Copper Collectors 3/4" dia., of approved brand. Price shall include all openings (eyes), and shall include for the required copper adaptors, hangers, supports, ties, air vents. Collectors shall be installed on walls, as shown on drawings. The work shall be completed as specified and according to the Engineer's instructions.</p>	eye	5		
5.4.16	<p>Supply and install wall/window type exhaust fans of approved manufacture (European type or equal) complete with self – act automatic shutter. Price includes galvanized ducts, grills, shutter and making necessary holes in walls or glass and fixing, and wiring cables all as per specifications, and approval of supervisor engineer. The fan shall have it is own electrical wiring inside walls or ceiling, one socket/key etc. The price shall include any excavation, painting, plastering etc. all as shown in drawings, specifications, and approval of supervisor engineer. Extract Fan, 100 CFM</p>	No.	2		

5.4.17	Supply and install floor cleanout 4" UPVC including stainless steel (sraled type) cover (15*15cm) complete with connection to drain pipes as located in drawings, specifications and approval of supervisor engineer	No.	4		
Total Marj Na'jeh Co-ed Secondary School (NIS)					

BILLS OF QUANTITIES					
CONSULTANT: Universal Group for Engineering and Consulting			DATE: March 2023		
Jericho Preparatory Girls School					
ITEM No.	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (ILS)	AMOUNT (ILS)
6.1	Preliminary Items				
6.1.1	Supply and installation of the project marble sign (110 cm x 70cm) that include coloured project information. The Contractor shall do the design and fix the sign as per the supervision engineer instructions. The price shall include fixing the sign properly with all required drilling, jumbo bolts, rehabilitation of any damages occurred during fixation.	No.	1		
6.1.2	Demolishing works inside the three WASH facilities (WCs) that intersects with the designed structure in accordance with the drawings. The price shall include demolishing but not limited to all inside partition walls, stalls, floors Tiles, Wall Tiles, electrical wires, lighting Points, Collectors, Sockets, Outlets, toilets, squatting toilets, windows, under tiles sewerage pipes/network, internal water supply network, etc. all as per drawings, and supervision engineer instructions. The price shall also includes demolish or removal of all obstacles, excavation, levelling etc. all as per drawings, and supervision engineer instructions. The price shall include remove all demolished materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
6.1.3	Remove carefully works inside the three WASH facilities (WCs). The price shall include but not limited to remove carefully, main doors, WC doors, sinks, wash basins, lighting Points, Collectors, accessories, taps, etc. all as per drawings, and Engineer instructions. The Contractor shall transport all removed materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
6.1.4	<u>Door and windows Opening in Reinforced Concrete or Hollow Block</u> Allow for every expenses to make a door opening in RE concrete wall. The price shall also include all needed works to complete the works as per drawings, specifications and engineer instructions. The Contractor shall transport all removed materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
6.1.5	<u>Reduce the level of the ground in the WASH unit</u> Allow for every expenses to reduce the levels of the ground to be as per specifications. The price shall also include all needed works to complete the works as per drawings, specifications and engineer instructions. The Contractor shall transport all removed materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
6.1.6	Provisional Items: The Contractor to account for any unexpected works including any necessary demolishing, rubble concrete in excavation, any needed paste and plaster, painting, tiling, panels, demolishing, maintenance for doors, windows, fixing window sills, door thresholds, brick walls, any leakage using appropriate materials and sealent for the roofs shed and sandwich panels, any isolation and insulation, maintenance and covering of electrical wiring, maintenance for mechanical piping and plumping required as per site conditions and engineers instructions and to assure universally accepted safety, acceptable conditions and appropriate aesthetic standards.	L.S	1		
6.2	External Works				

6.2.1	<p><b><u>Awning Works</u></b>  Supply and install steel awning at one location or several location as per the detail in the drawing and as per supervision engineer. The price shall also include all steel tubes (columns, horizontal, vertical etc.), steel corrugated sheets, drain gutters, steel bolts, excavation, backfilling, reinforced concrete foundations, reinstatement, 3 Inch galvanized Steel rain water, painting, the fixation, joints, angles and whatever necessary to complete the work in accordance with the drawings, specifications and to the approval of the supervision engineer. Price to include any required works including but not limited to, sealant works, fixing, fastening, welding etc. The Hight of the awning as per drawings or 3.5 meter if not mentioned. The final location or several locations of awning will be fixed during the shop drawing phase and as instructed by the supervision engineer, the Contractor shall not claim for additional cost or object.</p>	m2	25		
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<b>6.3</b>	<b>Rehabilitation of existing WASH units (Ground Floor- WASH Facility No. 1)</b>				
<b>A. Civil Works</b>					
<b>6.3.1</b>	Supply and Build Concrete Block Walls, 'Grade 35' of any size blocks single or cavity. The measurements will be to one side only all done according to the dwg. specifications and Engineer instructions and approval. Hollow blocks 10 cm thick for the partition walls. Price shall also include Supply and Cast Reinforced Concrete Grade 'B250 With a minimum cement content of 300 Kg. per cubic meter. Price also to include shuttering, reinforcing 4Ø10 and stirrups 1Ø8@25cm, and all related works according to drawings and specifications and engineer instructions. For the beams 20cmX 10cm above Hollow blocks	M <sup>2</sup>	5.0		
<b>6.3.2</b>	Supply and paint three coats polycide paint for ceilings including corridor ceilings of high quality (Approved by Palestine Standards Institution) and by the supervision engineer.	M <sup>2</sup>	35		
<b>6.3.3</b>	Supply and paint high quality emulsion paint, for top walls and internal drop beams (sides and bottom), on one priming coat and two finishing coats, using two coats of complete putty, as per satisfaction of the supervisor engineer.	M <sup>2</sup>	22		
<b>6.3.4</b>	Supply and Fix Factory-made Steel Doors as per drawings, specification. Price to include frame (door) (as per details), fixing completely, ironmongery, cylinders, cylindrical locks handles (Approved by Palestine Standards Institution). 6 mm. glazing, gaskets, oil Paint in three coats in addition to two primer coats. A 40cm x 40cm sign made of Metal shall be fixed on the door. The sign should be coloured and the icon and writing to be assigned by the supervision engineer, Dimensions: 1m *2.0m	No.	2		
<b>6.3.5</b>	Supply and Install Non-Slip Coloured Ceramic Floor Tiles 0.6 cm Thickness. First choice and free from all defect grade "A". (Approved by Palestine Standards Institution). Price to include sand with cement filling (Grade B-100), pointing with white cement and cleaning on site, removal of the old tiles, levelling and all the necessary work to complete the job in accordance with the instructions of the supervision engineer.	M <sup>2</sup>	35		
<b>6.3.6</b>	Supply and Install White Glazed or coloured Ceramic Wall Tiles 0.6 cm Thickness, First choice European type and free from all defects Grade "A". (Approved by Palestine Standards Institution). Price to include white round aluminium edges patching around services. Two coats of epoxy pointing ..All works shall be in accordance with drawings and specifications.	M <sup>2</sup>	113		
<b>6.3.7</b>	Supply, fix and operate non sliding Aluminium Windows extrusion Section 7700 or equal, with protective electrostatic applied polyester powder paint of 70-80 microns. Price to include 6.38mm thick laminated glass (3+0.38+3mm) for double glass. float glazing and all other accessories and fittings to complete works as per drawings and specifications. Price shall include the steel protection from outside made of steel frame and steel wire mesh. Price shall also include painting, fixing etc.	M <sup>2</sup>	3.5		
<b>6.3.8</b>	Supply and install Local marble threshold for under Doors and under windows 3-4 cm thickness. All as per drawings, specifications and supervision engineer.	m2	4		

6.3.9	<p>Supply and Fix Wooden Doors 4.5 cm Thick single or double sashes. With (Frame),(4.5*3.5) cm hardwood (Zan) edging and (3.5*9.5) cm soft wood stile. Edge strip banding of width 4.5 mm. Formica over veneer on both sides, colour for frames and Architrave as directed by engineer. Door paneling to be soft wood 4.5*3.5 cm. each 4 cm. frames of galvanized steel sheet frame of 2mm thick for corridor doors ( as per drawings), width according to the wall thickness' and Allowance of 4 - 6 cm. thickness for plastering and tiling purposes, immersed in wood preservative before erection then embedded completely in sand - cement mortar and completely anchored as per specification. Architrave of Hardwood (Swedish)(4*1.2)cm, price to include ironmongery, kick plates of aluminium 20cm height from one side for main bath room doors, U shaped 10cm height from both sides at the bottom for internal doors kick plates of aluminium 20cm height for bath room doors, U shaped both sides, and at the bottom door stoppers, transparent fiber glass 6mm thick for both upper vision panel &amp; for vision panel inside door leaf, gaskets cylindrical Lock ((Approved by Palestine Standards Institution), and painting in three coats of oil paint in addition to primer coat. Price includes also aluminium louvers of 50x60cm in the bottom for store doors. All as per Detailed Drawings, specification. Size as per drawings</p>	No.	7		
<b>B. Electrical Works</b>					
	<p>Preamble: All Supplied Materials Should be Local Made (if available), Grade A and Free From Defects, Having Supervisor Certificate From Palestinian Standard Institution (PSI).</p> <p>Price to include submittal and obtaining approval of shop drawings, detailed and as-built drawings for all works as well as coordinating the same with the other services, activities and furniture.</p> <p>Price to include, also, submittal of catalogues and manufacturer instruction. Fixtures and appliances shall be measured in number. Supply and feeder Cables, cable conduits and cable trays shall not be measured but included in DB's prices</p> <p>Manholes, handholds and the like shall be measured in number. All Systems and devices shall be in lump sum including installation, testing and commissioning.</p> <p>Rates of fixtures and appliances shall include installation, wiring, switches and conduit works.</p> <p>All systems equipment (Class A and approved by Palestine Standards Institution)</p>				
6.3.10	<p><b>Lighting points</b></p> <p>Supply, Install and Connect Lighting Points including fire proof boxes fire proof Conduits, fire retardant (E90) 3*1.5 mm2 cables and 5*1.5mm2 for emergency kits, Light Switches, and all accessories as per drawings and specifications. Price to also include any necessary painting or tiling after connecting the points.</p>	SET No.	4		
6.3.11	<p><b>Lighting fixtures</b></p> <p>Supply, Install and Connect the following high frequency control gear Lighting Fixtures including P.F. correction capacitors, Lamps, installation for all lighting fixtures using galvanized iron chains to suspend the fixtures in the ceiling and all accessories as per drawings and specifications. Supply and install Surface mounted Type A or Type B as per drawings</p>	SET No.	4		
<b>C. Mechanical Works</b>					



	<p>Preamble. Supply networks pipes To Tanks, or from on roof feeding tanks to collectors shall be priced in Linear meter. Water tanks shall be measured in number. , Sanitary Fixtures shall be measured in number, price to include cold and hot water pipes supply and fittings to collectors, also to include drain supply , fittings connection, to manholes. Drains, Floor Traps, Clean outs and the like shall be measured in number.</p> <p>Internal sanitary sewers network shall be included in the rates of sanitary fixtures and appliances. and the sanitary fixtures includes the cost of poexgol pipes for basins, toilets, science lab basins, home economics basins, ..etc., price also includes the connection to drainage network of these fixtures in sanitary units and labs. Vents and vertical stacks shall measured in linear meter. Manhole, Galleys and the like shall be measured in number. External sewers pipes shall be measured in linear meter for each individual diameter and material. Rates of all fittings , fixtures , appliances and pipe laying shall include:- Supply of material, workmanship, installation, testing and commissioning. Rates to include also all peace's and fittings, including by passes , floats, cleaning outlets , automatic vents, vents and stack covers, valves and non return valves and the like needed to complete works as per specifications. Insulation and painting as called for in specifications. Excavation and cutting for all pipe laying works, bedding back filling and all works connected with pipe laying. All ties, sleeves, joints, tie bolts and rods, brackets and the like. Rates to include Workshops, Coordinated and as- built drawings as approved by the Engineer. , the contractor should submit best quality, approved two brands for each mechanical works items for approval, and should be approved by PSI, any cut in blocks for installations should be done using special cutting machine, (all mechanical materials as sanitary fixtures fixtures, devices should be Italy made, Germany, Spanish made or equivalent )</p>				
6.3.12	<p>Remove the old Arabic style toilets and supply &amp; Install Porcelain W.C. bowl class "A" white or coloured , (Italy, Spanish made or equivalent) with heavy duty seat and cover. Price includes plastic flush tank, hanging iron steel bracket, bolts and nuts, as well as flexible flush hose , valve, porcelain paper holder, connection to pexogol pipe, connection to drainage and all related materials. Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include complete removal of the old toilets, replacement of any broken tiles, broken valves and then supplying new Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings as per specifications , drawing and as directed by supervision engineer.</p>	Complete Set	7		
6.3.13	<p>Supply &amp; Install Porcelain wall hung wash basin white or coloured engineer of size 50 x 45 cm of approved brand (Italy, Spanish made or equivalent), Price shall include chromium plated mixer with chromium plated handle mounted on wall. the price also includes connection to Pexogol pipe, liquide soap holder , and all fixation and hanging bracket. Price includes supplying and installing 40x60cm mirror., semi pedestal and all other required materials, including connection to drainage system.</p>	Complete Set	5		
6.3.14	<p>Supply and install wall/window type exhaust fans of approved manufacture (European type or equal) complete with self – act automatic shutter. Price includes galvanized ducts, grills, shutter and making necessary holes in walls or glass and fixing, and wiring cables all as per specifications, and approval of supervisor engineer. The fan shall have it is own electrical wiring inside walls or ceiling, one socket/key etc. The price shall include any excavation, painting, plastering etc. all as shown in drawings, specifications, and approval of supervisor engineer. Extract Fan, 100 CFM</p>	No.	6		
6.3.15	<p>Supply and install floor cleanout 4" UPVC including stainless steel (sraled type) cover (15*15cm) complete with connection to drain pipes as located in drawings, specifications and approval of supervisor engineer</p>	No.	1		

6.3.16	Supply, install and test Copper Collectors 3/4" dia., of approved brand. Price shall include all openings (eyes), and shall include for the required copper adaptors, hangers, supports, ties, air vents. Collectors shall be installed on walls, as shown on drawings. The work shall be completed as specified and according to the Engineer's instructions.	eye	18		
6.4	Rehabilitation of existing WASH units (Ground Floor- WASH Facility No. 2)				
A. Civil Works					
6.4.1	Supply and Build Concrete Block Walls, 'Grade 35' of any size blocks single or cavity. The measurements will be to one side only all done according to the dwg. specifications and Engineer instructions and approval. Hollow blocks 10 cm thick for the partition walls. Price shall also include Supply and Cast Reinforced Concrete Grade 'B250 With a minimum cement content of 300 Kg. per cubic meter. Price also to include shuttering, reinforcing 4Ø10 and stirrups 1Ø8@25cm, and all related works according to drawings and specifications and engineer instructions. For the beams 20cmX 10cm above Hollow blocks	M <sup>2</sup>	4.0		
6.4.2	Supply and paint three coats polycide paint for ceilings including corridor ceilings of high quality (Approved by Palestine Standards Institution) and by the supervision engineer.	M <sup>2</sup>	35		
6.4.3	Supply and paint high quality emulsion paint, for top walls and internal drop beams (sides and bottom), on one priming coat and two finishing coats, using two coats of complete putty, as per satisfaction of the supervisor engineer.	M <sup>2</sup>	28		
6.4.4	Supply and Fix Factory-made Steel Doors as per drawings, specification. Price to include frame ( door) (as per details), fixing completely, ironmongery, cylinders, cylindrical locks handles (Approved by Palestine Standards Institution). 6 mm. glazing, gaskets, oil Paint in three coats in addition to two primer coats. A 40cm x 40cm sign made of Metal shall be fixed on the door. The sign should be coloured and the icon and writing to be assigned by the supervision engineer.	No.	1		
6.4.5	Supply and Install Non-Slip Coloured Ceramic Floor Tiles 0.6 cm Thickness. First choice and free from all defect grade "A". (Approved by Palestine Standards Institution). Price to include sand with cement filling (Grade B-100), pointing with white cement and cleaning on site, removal of the old tiles, levelling and all the necessary work to complete the job in accordance with the instructions of the supervision engineer.	M <sup>2</sup>	35		
6.4.6	Supply and Install White Glazed or coloured Ceramic Wall Tiles 0.6 cm Thickness, First choice European type and free from all defects Grade "A". (Approved by Palestine Standards Institution). Price to include white round aluminium edges patching around services. Two coats of epoxy pointing ..All works shall be in accordance with drawings and specifications.	M <sup>2</sup>	115		
6.4.7	Supply, fix and operate non sliding Aluminium Windows extrusion Section 7700 or equal, with protective electrostatic applied polyester powder paint of 70-80 microns. Price to include 6.38mm thick laminated glass (3+0.38+3mm) for double glass. float glazing and all other accessories and fittings to complete works as per drawings and specifications. Price shall include the steel protection from outside made of steel frame and steel wire mesh. Price shall also include painting, fixing etc.	M <sup>2</sup>	6.0		

6.4.8	Supply and install Local marble threshold for under Doors and under windows 3-4 cm thickness. All as per drawings, specifications and supervision engineer.	m2	4		
6.4.9	Supply and Fix Wooden Doors 4.5 cm Thick single or double sashes. With (Frame).(4.5*3.5) cm hardwood (Zan) edging and (3.5*9.5) cm soft wood stile. Edge strip banding of width 4.5 mm. Formica over veneer on both sides, colour for frames and Architrave as directed by engineer. Door paneling to be soft wood 4.5*3.5 cm. each 4 cm., frames of galvanized steel sheet frame of 2mm thick for corridor doors ( as per drawings), width according to the wall thickness' and Allowance of 4 - 6 cm. thickness for plastering and tiling purposes, immersed in wood preservative before erection then embedded completely in sand - cement mortar and completely anchored as per specification. Architrave of Hardwood (Swedish)(4*1.2)cm, price to include ironmongery, kick plates of aluminium 20cm height from one side for main bath room doors, U shaped 10cm height from both sides at the bottom for internal doors kick plates of aluminium 20cm height for bath room doors, U shaped both sides, and at the bottom door stoppers, transparent fiber glass 6mm thick for both upper vision panel & for vision panel inside door leaf, gaskets cylindrical Lock ((Approved by Palestine Standards Institution), and painting in three coats of oil paint in addition to primer coat. Price includes also aluminium louvers of 50x60cm in the bottom for store doors. All as per Detailed Drawings, specification. Size as per drawings	No.	4		
6.4.10	Supply and Fix Wooden Doors 4.5 cm Thick single or double sashes. With Hardwood (Zan) Frame size (4.5*3.5) cm, and (3.5*9.5) cm soft wood stile. Edge strip banding of width 4.5 mm. Plywood veneer 5mm Thick on both sides. Door paneling to be soft wood 4.5*3.5 cm. each 4 cm., Frame of galvanized steel sheet frame of 2mm thick, width according to the wall thickness' and Allowance of 4 - 6 cm. thickness for plastering and tiling purposes, immersed in wood preservative before erection then embedded completely in sand - cement mortar and completely anchored as per specification. Price to include all the works including ironmongery, cylinders, locks, handles and paint.	No.	1		
<b>B. Electrical Works</b>					
	<p>Preamble: All Supplied Materials Should be Local Made (if available), Grade A and Free From Defects, Having Supervisor Certificate From Palestinian Standard Institution (PSI).</p> <p>Price to include submittal and obtaining approval of shop drawings, detailed and as-built drawings for all works as well as coordinating the same with the other services, activities and furniture.</p> <p>Price to include, also, submittal of catalogues and manufacturer instruction. Fixtures and appliances shall be measured in number. Supply and feeder Cables, cable conduits and cable trays shall not be measured but included in DB's prices</p> <p>Manholes, handholds and the like shall be measured in number. All Systems and devices shall be in lump sum including installation, testing and commissioning.</p> <p>Rates of fixtures and appliances shall include installation, wiring, switches and conduit works.</p> <p>All systems equipment (Class A and approved by Palestine Standards Institution)</p>				
6.4.11	<p><b>Lighting points</b></p> <p>Supply, Install and Connect Lighting Points including fire proof boxes fire proof Conduits, fire retardant (E90) 3*1.5 mm2 cables and 5*1.5mm2 for emergency kits, Light Switches, and all accessories as per drawings and specifications. Price to also include any necessary painting or tiling after connecting the points.</p>	SET No.	3		

6.4.12	<b>Lighting fixtures</b> Supply, Install and Connect the following high frequency control gear Lighting Fixtures including P.F. correction capacitors, Lamps, installation for all lighting fixtures using galvanized iron chains to suspend the fixtures in the ceiling and all accessories as per drawings and specifications. Supply and install Surface mounted Type A or Type B as per drawings	SET No.	3		
<b>C. Mechanical Works</b>					
	<p>Preamble. Supply networks pipes To Tanks, or from on roof feeding tanks to collectors shall be priced in Linear meter. Water tanks shall be measured in number. , Sanitary Fixtures shall be measured in number, price to include cold and hot water pipes supply and fittings to collectors, also to include drain supply , fittings connection, to manholes. Drains, Floor Traps, Clean outs and the like shall be measured in number.</p> <p>Internal sanitary sewers network shall be included in the rates of sanitary fixtures and appliances. and the sanitary fixtures includes the cost of poexgol pipes for basins, toilets, science lab basins, home economics basins, ..etc., price also includes the connection to drainage network of these fixtures in sanitary units and labs. Vents and vertical stacks shall measured in linear meter. Manhole, Galleys and the like shall be measured in number. External sewers pipes shall be measured in linear meter for each individual diameter and material. Rates of all fittings , fixtures , appliances and pipe laying shall include:- Supply of material, workmanship, installation, testing and commissioning. Rates to include also all peace's and fittings, including by passes , floats, cleaning outlets , automatic vents, vents and stack covers, valves and non return valves and the like needed to complete works as per specifications. Insulation and painting as called for in specifications. Excavation and cutting for all pipe laying works, bedding back filling and all works connected with pipe laying. All ties, sleeves, joints, tie bolts and rods, brackets and the like. Rates to include Workshops, Coordinated and as- built drawings as approved by the Engineer. , the contractor should submit best quality, approved two brands for each mechanical works items for approval, and should be approved by PSI, any cut in blocks for installations should be done using special cutting machine, (all mechanical materials as sanitary fixtures fixtures, devices should be Italy made, Germany, Spanish made or equivalent )</p>				
6.4.13	Supply & Install Porcelain W.C. bowl class "A" white or coloured , (Italy, Spanish made or equivalent) with heavy duty seat and cover. Price includes plastic flush tank, hanging iron steel bracket, bolts and nuts, as well as flexible flush hose , valve, porcelain paper holder, connection to pexogol pipe, connection to drainage and all related materials. Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include complete removal of the old toilets, replacement of any broken tiles, broken valves and then supplying new Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings as per specifications , drawing and as directed by supervision engineer.	Complete Set	4		

6.4.14	Supply & Install Porcelain wall hung wash basin white or coloured engineer of size 50 x 45 cm of approved brand (Italy, Spanish made or equivalent), Price shall include chromium plated mixer with chromium plated handle mounted on wall. the price also includes connection to Pexogol pipe, liquide soap holder , and all fixation and hanging bracket. Price includes supplying and installing 40x60cm mirror., semi pedestal and all other required materials, including connection to drainage system.	Complete Set	4		
6.4.15	Supply and Install White Vitreous Western type handicapped Toilet (Class A and approved by Palestine Standards Institution) Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings, accessories movable handle and fixed handle as shown on drawings and in Specifications. as per specifications , drawing and as directed by supervision Engineer.	Complete Set	1		
6.4.16	Supply and Install White Vitreous China handicapped Wash Basin (Class A and approved by Palestine Standards Institution), size (40 * 56) cm. Complete with all fittings, valves, waste pipes to nearest floor trap, taps or mixer (Class A and approved by Palestine Standards Institution), connection to water distribution, traps, and any other necessary parts as Specification and as directed by Eng. Price includes supplying and installing 40x60cm mirror. Gear tap.	Complete Set	1		
6.4.17	Supply and install 4" UPVC pipes SN8 heavy duty, at least (4.9mm) thick, Local Made or equal and must be approved by Palestine Standard Institution, between manholes in with all required materials, sockets, fittings , rubber seals, elbow, etc. The price includes excavation ,backfilling of at least 15 cm sand above , below and around the pipes including back-filling of selected material above the sand, and disposal of surplus excavated materials. Excavation shall be to any depth, width, and in any type of soil or rock, connection for internal sewerage network to connect to existing or proposed new sewage network or the septic tank and insulation of septic tank wall after connection.	L.M	4		
6.4.18	Supply and install wall/window type exhaust fans of approved manufacture (European type or equal) complete with self – act automatic shutter. Price includes galvanized ducts, grills, shutter and making necessary holes in walls or glass and fixing, and wiring cables all as per specifications, and approval of supervisor engineer. The fan shall have it is own electrical wiring inside walls or ceiling, one socket/key etc. The price shall include any excavation, painting, plastering etc. all as shown in drawings, specifications, and approval of supervisor engineer. Extract Fan, 100 CFM	No.	4		
6.4.19	Supply and install floor cleanout 4" UPVC including stainless steel (sraled type) cover (15*15cm) complete with connection to drain pipes as located in drawings, specifications and approval of supervisor engineer	No.	1		
6.4.20	Supply, install and test Copper Collectors 3/4" dia., of approved brand. Price shall include all openings (eyes), and shall include for the required copper adaptors, hangers, supports, ties, air vents. Collectors shall be installed on walls, as shown on drawings. The work shall be completed as specified and according to the Engineer's instructions.	eye	24		

6.5	Rehabilitation of existing WASH units (Second Floor- WASH Facility)				
A. Civil Works					
6.5.1	Supply and Build Concrete Block Walls, 'Grade 35' of any size blocks single or cavity. The measurements will be to one side only all done according to the dwg. specifications and Engineer instructions and approval. Hollow blocks 10 cm thick for the partition walls. Price shall also include Supply and Cast Reinforced Concrete Grade 'B250 With a minimum cement content of 300 Kg. per cubic meter. Price also to include shuttering, reinforcing 4Ø10 and stirrups 1Ø8@25cm, and all related works according to drawings and specifications and engineer instructions. For the beams 20cmX 10cm above Hollow blocks	M <sup>2</sup>	0.0		
6.5.2	Supply and paint three coats polycide paint for ceilings including corridor ceilings of high quality (Approved by Palestine Standards Institution) and by the supervision engineer.	M <sup>2</sup>	35		
6.5.3	Supply and paint high quality emulsion paint, for top walls and internal drop beams (sides and bottom), on one priming coat and two finishing coats, using two coats of complete putty, as per satisfaction of the supervisor engineer.	M <sup>2</sup>	28		
6.5.4	Supply and Fix Factory-made Steel Doors as per drawings, specification. Price to include frame (door) (as per details), fixing completely, ironmongery, cylinders, cylindrical locks handles (Approved by Palestine Standards Institution). 6 mm. glazing, gaskets, oil Paint in three coats in addition to two primer coats. A 40cm x 40cm sign made of Metal shall be fixed on the door. The sign should be coloured and the icon and writing to be assigned by the supervision engineer.	No.	1		
6.5.5	Supply and Install Non-Slip Coloured Ceramic Floor Tiles 0.6 cm Thickness. First choice and free from all defect grade "A". (Approved by Palestine Standards Institution). Price to include sand with cement filling (Grade B-100), pointing with white cement and cleaning on site, removal of the old tiles, levelling and all the necessary work to complete the job in accordance with the instructions of the supervision engineer.	M <sup>2</sup>	35		
6.5.6	Supply and Install White Glazed or coloured Ceramic Wall Tiles 0.6 cm Thickness, First choice European type and free from all defects Grade "A". (Approved by Palestine Standards Institution). Price to include white round aluminium edges patching around services. Two coats of epoxy pointing ..All works shall be in accordance with drawings and specifications.	M <sup>2</sup>	115		
6.5.7	Supply, fix and operate non sliding Aluminium Windows extrusion Section 7700 or equal, with protective electrostatic applied polyester powder paint of 70-80 microns. Price to include 6.38mm thick laminated glass (3+0.38+3mm) for double glass. float glazing and all other accessories and fittings to complete works as per drawings and specifications. Price shall include the steel protection from outside made of steel frame and steel wire mesh. Price shall also include painting, fixing etc.	M <sup>2</sup>	6.0		
6.5.8	Supply and install Local marble threshold for under Doors and under windows 3-4 cm thickness. All as per drawings, specifications and supervision engineer.	m2	4		
6.5.9	Supply and Fix Wooden Doors 4.5 cm Thick single or double sashes. With (Frame).(4.5*3.5) cm hardwood (Zan) edging and (3.5*9.5) cm soft wood stile. Edge strip banding of width 4.5 mm. Formica over veneer on both sides, colour for frames and Architrave as directed by engineer. Door paneling to be soft wood 4.5*3.5 cm. each 4 cm., frames of hardwood (Swedish) 4.5cm thickness or galvanized steel sheet frame of 2mm thick for corridor doors ( as per drawings), width according to the wall thickness' and Allowance of 4 - 6 cm. thickness for plastering and tiling purposes, immersed in wood preservative before erection then embedded completely in sand - cement mortar and completely anchored as per specification. Architrave of Hardwood (Swedish)(4*1.2)cm, price to include ironmongery, kick plates of aluminium 20cm height from one side for main bath room doors, U shaped 10cm height from both sides at the bottom for internal doors kick plates of aluminium 20cm height for bath room doors, U shaped both sides, and at the bottom door stoppers, transparent fiber glass 6mm thick for both upper vision panel & for vision panel inside door leaf, gaskets cylindrical Lock ((Approved by Palestine Standards Institution), and painting in three coats of oil paint in addition to primer coat. Price includes also aluminium louvers of 50x60cm in the bottom for store doors. All as per Detailed Drawings, specification. Size as per drawings	No.	7		
B. Electrical Works					

	<p>Preamble: All Supplied Materials Should be Local Made (if available), Grade A and Free From Defects, Having Supervisor Certificate From Palestinian Standard Institution (PSI).</p> <p>Price to include submittal and obtaining approval of shop drawings, detailed and as-built drawings for all works as well as coordinating the same with the other services, activities and furniture.</p> <p>Price to include, also, submittal of catalogues and manufacturer instruction. Fixtures and appliances shall be measured in number. Supply and feeder Cables, cable conduits and cable trays shall not be measured but included in DB's prices</p> <p>Manholes, handholds and the like shall be measured in number. All Systems and devices shall be in lump sum including installation, testing and commissioning.</p> <p>Rates of fixtures and appliances shall include installation, wiring, switches and conduit works.</p> <p>All systems equipment (Class A and approved by Palestine Standards Institution)</p>				
6.5.10	<p><b>Lighting points</b></p> <p>Supply, Install and Connect Lighting Points including fire proof boxes fire proof Conduits, fire retardant (E90) 3*1.5 mm2 cables and 5*1.5mm2 for emergency kits, Light Switches, and all accessories as per drawings and specifications. Price to also include any necessary painting or tiling after connecting the points.</p>	SET No.	5		
6.5.11	<p><b>Lighting fixtures</b></p> <p>Supply, Install and Connect the following high frequency control gear Lighting Fixtures including P.F. correction capacitors, Lamps, installation for all lighting fixtures using galvanized iron chains to suspend the fixtures in the ceiling and all accessories as per drawings and specifications. Supply and install Surface mounted Type A or Type B as per drawings</p>	SET No.	5		
<b>C. Mechanical Works</b>					
	<p>Preamble. Supply networks pipes To Tanks, or from on roof feeding tanks to collectors shall be priced in Linear meter. Water tanks shall be measured in number. , Sanitary Fixtures shall be measured in number, price to include cold and hot water pipes supply and fittings to collectors, also to include drain supply , fittings connection, to manholes. Drains, Floor Traps, Clean outs and the like shall be measured in number.</p> <p>Internal sanitary sewers network shall be included in the rates of sanitary fixtures and appliances. and the sanitary fixtures includes the cost of poexgol pipes for basins, toilets, science lab basins, home economics basins, ..etc., price also includes the connection to drainage network of these fixtures in sanitary units and labs. Vents and vertical stacks shall measured in linear meter. Manhole, Galleys and the like shall be measured in number. External sewers pipes shall be measured in linear meter for each individual diameter and material. Rates of all fittings , fixtures , appliances and pipe laying shall include:- Supply of material, workmanship, installation, testing and commissioning. Rates to include also all peace's and fittings, including by passes , floats, cleaning outlets , automatic vents, vents and stack covers, valves and non return valves and the like needed to complete works as per specifications. Insulation and painting as called for in specifications. Excavation and cutting for all pipe laying works, bedding back filling and all works connected with pipe laying. All ties, sleeves, joints, tie bolts and rods, brackets and the like. Rates to include Workshops, Coordinated and as- built drawings as approved by the Engineer. , the contractor should submit best quality, approved two brands for each mechanical works items for approval, and should be approved by PSI, any cut in blocks for installations should be done using special cutting machine, (all mechanical materials as sanitary fixtures fixtures, devices should be Italy made, Germany, Spanish made or equivalent )</p>				
6.5.12	<p>Supply &amp; Install Porcelain W.C. bowl class "A" white or coloured , (Italy, Spanish made or equivalent) with heavy duty seat and cover. Price includes plastic flush tank, hanging iron steel bracket, bolts and nuts, as well as flexible flush hose , valve, porcelain paper holder, connection to pexogol pipe, connection to drainage and all related materials. Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include complete removal of the old toilets, replacement of any broken tiles, broken valves and then supplying new Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings as per specifications , drawing and as directed by supervision engineer.</p>	Complete Set	7		

<b>6.5.13</b>	Supply & Install Porcelain wall hung wash basin white or coloured engineer of size 50 x 45 cm of approved brand (Italy, Spanish made or equivalent), Price shall include chromium plated mixer with chromium plated handle mounted on wall. the price also includes connection to Pexogol pipe, liquide soap holder , and all fixation and hanging bracket. Price includes supplying and installing 40x60cm mirror., semi pedestal and all other required materials, including connection to drainage system.	Complete Set	5		
<b>6.5.14</b>	Supply and install wall/window type exhaust fans of approved manufacture (European type or equal) complete with self – act automatic shutter. Price includes galvanized ducts, grills, shutter and making necessary holes in walls or glass and fixing, and wiring cables all as per specifications, and approval of supervisor engineer. The fan shall have it is own electrical wiring inside walls or ceiling, one socket/key etc. The price shall include any excavation, painting, plastering etc. all as shown in drawings, specifications, and approval of supervisor engineer. Extract Fan, 100 CFM	No.	5		
<b>6.5.15</b>	Supply and install floor cleanout 4" UPVC including stainless steel (sraled type) cover (15*15cm) complete with connection to drain pipes as located in drawings, specifications and approval of supervisor engineer	No.	1		
<b>6.5.16</b>	Supply, install and test Copper Collectors 3/4" dia., of approved brand. Price shall include all openings (eyes), and shall include for the required copper adaptors, hangers, supports, ties, air vents. Collectors shall be installed on walls, as shown on drawings. The work shall be completed as specified and according to the Engineer's instructions.	eye	23		
<b>6.6</b>	<b>Rehabilitation of Water Network in the school</b>				
<b>6.6.1</b>	Supply and Install Polyethylene White, domestic Water Tank. Capacity 1500 lit. "With Quality approval Tag" Including well painted steel balustrade support , automatic copper float valve, isolating valves, drain valve, fittings, vents, screwed cover, piping and connections till main cold water piping and all accessories; all according to the engineers' instructions and approval, the mounting of the tanks should be according to details including special bracing and flexible connections, painted steel base and what is required to complete the work. The price shall also include Steel structure with 2 meter hight to carry the tank safely.	No.	6		
<b>6.6.2</b>	Allow for every expenses to supply and install and totally replace all the water network inside the schools. The price shall include supply of 1 inch a and 3/4 inch sched 40 galvanized steel pipes with around 120 meter of steel pipes from the roof to the different WASH facilities. The price shall include all support , automatic copper float valve, isolating valves, drain valve, fittings, vents, screwed cover, piping and connections till main cold water piping and all accessories	L.S	1		



<b>6.7</b>	<b>Rehabilitation of Sewer Network in the school (behind the WCs)</b>				
6.7.1	Supply and install 6" UPVC pipes SN8 heavy duty, at least (4.9mm) thick, Local Made or equal and must be approved by Palestine Standard Institution, between manholes in with all required materials, sockets, fittings, rubber seals, elbow, etc. The price includes excavation, backfilling of at least 15 cm sand above, below and around the pipes including back-filling of selected material above the sand, and disposal of surplus excavated materials. Excavation shall be to any depth, width, and in any type of soil or rock, connection for internal sewerage network to connect to existing or proposed new sewerage network or the septic tank and insulation of septic tank wall after connection.	L.M	22		
6.7.2	Supply and Install of Precast Concrete Manholes with minimum 15cm wall thickness for sewage and storm water drainage In compliance with specifications and Drawings. Price shall include excavation to any depth according to slopes, B200 reinforced concrete for base, back filling, cement plaster, benching, 8 or 25Ton Cast Iron cover as indicated, drop if needed, and all necessary works. all as shown in drawings, specifications, and approval of supervisor engineer. a. Ø60cm, 8 ton C.I cover	No.	4		
<b>Total Jericho Preparatory Girls School (NIS)</b>					

BILLS OF QUANTITIES					
CONSULTANT: Universal Group for Engineering and Consulting			DATE: March 2023		
Ali Bin Abi Taleb Secondary boys School					
ITEM No.	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (ILS)	AMOUNT (ILS)
7.1	Preliminary Items				
7.1.1	Supply and installation of the project marble sign (110 cm x 70cm) that include colored project information. The Contractor shall do the design and fix the sign as per the supervision engineer instructions. The price shall include fixing the sign properly with all required drilling, jumbo bolts, rehabilitation of any damages occurred during fixation.	No.	1		
7.1.2	Demolishing works inside the three WASH facilities (WCs) that intersects with the designed structure in accordance with the drawings. The price shall include demolishing but not limited to all inside partition walls, stalls, floors Tiles, Wall Tiles, electrical wires, lighting Points, Collectors, Sockets, Outlets, toilets, squatting toilets, windows, under tiles sewerage pipes/network, internal water supply network, etc. all as per drawings, and supervision engineer instructions. The price shall also includes demolish or removal of all obstacles, excavation, leveling etc. all as per drawings, and supervision engineer instructions. The price shall include remove all demolished materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
7.1.3	Remove carefully works inside the three WASH facilities (WCs). The price shall include but not limited to remove carefully, main doors, WC doors, sinks, wash basins, lighting Points, Collectors, accessories, taps, etc. all as per drawings, and Engineer instructions. The Contractor shall transport all removed materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
7.1.4	<u>Clean of the sewarge system</u> Completely clean the existing sewage system (Manholes and pipes) inside and outside the WASH facility using a proper method (Air pressure or water pressure) complete with all realted works. The price shall include the water if water method is used.	L.S	1		
7.2	External Works				
7.2.1	<u>Awning Works</u> Supply and install steel awning at one location or several location as per the detail in the drawing and as per supervision engineer. The price shall also include all steel tubes (columns, horizontal, vertical etc.), steel corrugated sheets, drain gutters, steel bolts, excavation, backfilling, reinforced concrete foundations, reinstatement, 3 Inch galvanized Steel rain water, painting, the fixation, joints, angles and whatever necessary to complete the work in accordance with the drawings, specifications and to the approval of the supervision engineer. Price to include any required works including but not limited to, sealant works, fixing, fastening, welding etc. The Hight of the awning as per drawings or 3.5 meter if not mentioned. The final location or several locations of awning will be fixed during the shop drawing phase and as instructed by the supervision engineer, the Contractor shall not claim for additional cost or object.	m2	25		

<b>7.3</b>	<b>Rehabilitation of existing WASH units (Female Teachers)</b>				
<b>A. Civil Works</b>					
<b>7.3.1</b>	Supply and Build Concrete Block Walls, 'Grade 35' of any size blocks single or cavity. The measurements will be to one side only all done according to the dwg. specifications and Engineer instructions and approval. Hollow blocks 10 cm thick for the partition walls. Price shall also include Supply and Cast Reinforced Concrete Grade 'B250 With a minimum cement content of 300 Kg. per cubic meter. Price also to include shuttering, reinforcing 4Ø10 and stirrups 1Ø8@25cm, and all related works according to drawings and specifications and engineer instructions. For the beams 20cmX 10cm above Hollow blocks	M <sup>2</sup>	0.0		
<b>7.3.2</b>	Supply and paint three coats polycide paint for ceilings including corridor ceilings of high quality (Approved by Palestine Standards Institution) and by the supervision engineer.	M <sup>2</sup>	39		
<b>7.3.3</b>	Supply and paint high quality emulsion paint, for top walls and internal drop beams (sides and bottom), on one priming coat and two finishing coats, using two coats of complete putty, as per satisfaction of the supervisor engineer.	M <sup>2</sup>	20		
<b>7.3.4</b>	Supply and Fix Factory-made Steel Doors as per drawings, specification. Price to include frame (door) (as per details), fixing completely, ironmongery, cylinders, cylindrical locks handles (Approved by Palestine Standards Institution). 6 mm. glazing, gaskets, oil Paint in three coats in addition to two primer coats. A 40cm x 40cm sign made of Metal shall be fixed on the door. The sign should be colored and the icon and writing to be assigned by the supervision engineer, Dimensions: 1m *2.0m	No.	1		
<b>7.3.5</b>	Supply and Install Non-Slip Colored Ceramic Floor Tiles 0.6 cm Thickness. First choice and free from all defect grade "A". (Approved by Palestine Standards Institution). Price to include sand with cement filling (Grade B-100), pointing with white cement and cleaning on site, removal of the old tiles, leveling and all the necessary work to complete the job in accordance with the instructions of the supervision engineer.	M <sup>2</sup>	39		
<b>7.3.6</b>	Supply and Install White Glazed or colored Ceramic Wall Tiles 0.6 cm Thickness, First choice European type and free from all defects Grade "A". (Approved by Palestine Standards Institution). Price to include white round aluminum edges patching around services. Two coats of epoxy pointing ..All works shall be in accordance with drawings and specifications.	M <sup>2</sup>	75		
<b>7.3.7</b>	Supply, fix and operate non sliding Aluminum Windows extrusion Section 7700 or equal, with protective electrostatic applied polyester powder paint of 70-80 microns. In color of bronze. Price to include 6.38mm thick laminated glass (3+0.38+3mm) for double glass. float glazing and all other accessories and fittings to complete works as per drawings and specifications. Price shall include the steel protection from outside made of steel frame and steel wire mesh. Price shall also include painting, fixing etc.	M <sup>2</sup>	3.0		
<b>7.3.8</b>	Supply and install Local marble threshold for under Doors and under windows 3-4 cm thickness. All as per drawings, specifications and supervision engineer.	m2	3		

7.3.9	Supply and Fix Wooden Doors 4.5 cm Thick single or double sashes. With (Frame),(4.5*3.5) cm hardwood (Zan) edging and (3.5*9.5) cm soft wood stile. Edge strip banding of width 4.5 mm. Formica over veneer on both sides, color for frames and Architrave as directed by engineer. Door paneling to be soft wood 4.5*3.5 cm. each 4 cm., frames of galvanized steel sheet frame of 2mm thick for corridor doors ( as per drawings), width according to the wall thickness' and Allowance of 4 - 6 cm. thickness for plastering and tiling purposes, immersed in wood preservative before erection then embedded completely in sand - cement mortar and completely anchored as per specification. Architrave of Hardwood (Swedish)(4*1.2)cm, price to include ironmongery, kick plates of aluminum 20cm height from one side for main bath room doors, U shaped 10cm height from both sides at the bottom for internal doors kick plates of aluminum 20cm height for bath room doors, U shaped both sides, and at the bottom door stoppers, transparent fiber glass 6mm thick for both upper vision panel & for vision panel inside door leaf, gaskets cylindrical Lock ((Approved by Palestine Standards Institution), and painting in three coats of oil paint in addition to primer coat. Price includes also aluminum louvers of 50x60cm in the bottom for store doors. All as per Detailed Drawings, specification. Size as per drawings	No.	5		
7.3.10	Supply and Fix Wooden Doors 4.5 cm Thick single or double sashes. With Hardwood (Zan) Frame size (4.5*3.5) cm, and (3.5*9.5) cm soft wood stile. Edge strip banding of width 4.5 mm. Plywood veneer 5mm Thick on both sides. Door paneling to be soft wood 4.5*3.5 cm. each 4 cm., Frame of galvanized steel sheet frame of 2mm thick, width according to the wall thickness' and Allowance of 4 - 6 cm. thickness for plastering and tiling purposes, immersed in wood preservative before erection then embedded completely in sand - cement mortar and completely anchored as per specification. Price to include all the works including ironmongery, cylinders, locks, handles and paint.	No.	1		
<b>B. Electrical Works</b>					
	Preamble: All Supplied Materials Should be Local Made (if available), Grade A and Free From Defects, Having Supervisor Certificate From Palestinian Standard Institution (PSI). Price to include submittal and obtaining approval of shop drawings, detailed and as-built drawings for all works as well as coordinating the same with the other services, activities and furniture. Price to include, also, submittal of catalogues and manufacturer instruction. Fixtures and appliances shall be measured in number. Supply and feeder Cables, cable conduits and cable trays shall not be measured but included in DB's prices Manholes, handholds and the like shall be measured in number. All Systems and devices shall be in lump sum including installation, testing and commissioning. Rates of fixtures and appliances shall include installation, wiring, switches and conduit works. All systems equipment (Class A and approved by Palestine Standards Institution)				
7.3.10	<b>Lighting points</b> Supply, Install and Connect Lighting Points including fire proof boxes fire proof Conduits, fire retardant (E90) 3*1.5 mm2 cables and 5*1.5mm2 for emergency kits, Light Switches, and all accessories as per drawings and specifications. Price to also include any necessary painting or tiling after connecting the points.	SET No.	6		
7.3.11	<b>Lighting fixtures</b> Supply, Install and Connect the following high frequency control gear Lighting Fixtures including P.F. correction capacitors, Lamps, installation for all lighting fixtures using galvanized iron chains to suspend the fixtures in the ceiling and all accessories as per drawings and specifications. Supply and install Surface mounted Type A or Type B as per drawings	SET No.	6		
<b>C. Mechanical Works</b>					

	<p>Preamble. Supply networks pipes To Tanks, or from on roof feeding tanks to collectors shall be priced in Linear meter. Water tanks shall be measured in number. , Sanitary Fixtures shall be measured in number, price to include cold and hot water pipes supply and fittings to collectors, also to include drain supply , fittings connection, to manholes. Drains, Floor Traps, Clean outs and the like shall be measured in number.</p> <p>Internal sanitary sewers network shall be included in the rates of sanitary fixtures and appliances. and the sanitary fixtures includes the cost of poexgol pipes for basins, toilets, science lab basins, home economics basins, ..etc., price also includes the connection to drainage network of these fixtures in sanitary units and labs. Vents and vertical stacks shall measured in linear meter. Manhole, Galleys and the like shall be measured in number. External sewers pipes shall be measured in linear meter for each individual diameter and material. Rates of all fittings , fixtures , appliances and pipe laying shall include:- Supply of material, workmanship, installation, testing and commissioning. Rates to include also all peace's and fittings, including by passes , floats, cleaning outlets , automatic vents, vents and stack covers, valves and non return valves and the like needed to complete works as per specifications. Insulation and painting as called for in specifications. Excavation and cutting for all pipe laying works, bedding back filling and all works connected with pipe laying. All ties, sleeves, joints, tie bolts and rods, brackets and the like. Rates to include Workshops, Coordinated and as- built drawings as approved by the Engineer. , the contractor should submit best quality, approved two brands for each mechanical works items for approval, and should be approved by PSI, any cut in blocks for installations should be done using special cutting machine, (all mechanical materials as sanitary fixtures fixtures, devices should be Italy made, Germany, Spanish made or equivalent )</p>				
7.3.12	<p>Remove the old toilets and supply &amp; Install Porcelain W.C. bowl class "A" white or colored , (Italy, Spanish made or equivalent) with heavy duty seat and cover. Price includes plastic flush tank, hanging iron steel bracket, bolts and nuts, as well as flexible flush hose , valve, porcelain paper holder, connection to pexogol pipe, connection to drainage and all related materials. Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include complete removal of the old toilets, replacement of any broken tiles, broken valves and then supplying new Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings as per specifications , drawing and as directed by supervision engineer.</p>	Complete Set	2		
7.3.13	<p>Supply &amp; Install Porcelain wall hung wash basin white or colored engineer of size 50 x 45 cm of approved brand (Italy, Spanish made or equivalent), Price shall include chromium plated mixer with chromium plated handle mounted on wall. the price also includes connection to Pexogol pipe, porcelain soap holder , and all fixation and hanging bracket. Price includes supplying and installing 40x60cm mirror., semi pedestal and all other required materials, including connection to drainage system.</p>	Complete Set	3		
7.3.14	<p>Remove the old Arabic Style toiltles and supply &amp; Install a new one with all its accessories. Price includes plastic flush tank, hanging iron steel bracket, bolts and nuts, as well as flexible flush hose , valve, porcelain paper holder, connection to pexogol pipe, connection to drainage and all related materials. Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include complete removal of the old toilets, replacement of any broken tiles, broken valves and then supplying new Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings as per specifications , drawing and as directed by supervision engineer.</p>	Complete Set	3		

7.3.15	Supply and Install White Vitreous Western type handicapped Toilet (Class A and approved by Palestine Standards Institution) Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings, accessories movable handle and fixed handle as shown on drawings and in Specifications. as per specifications , drawing and as directed by supervision Engineer.	Complete Set	1		
7.3.16	Supply and Install White Vitreous China handicapped Wash Basin (Class A and approved by Palestine Standards Institution), size (40 * 56) cm. Complete with all fittings, valves, waste pipes to nearest floor trap, taps or mixer (Class A and approved by Palestine Standards Institution), connection to water distribution, traps, and any other necessary parts as Specification and as directed by Eng. Price includes supplying and installing 40x60cm mirror. Gear tap.	Complete Set	1		
7.3.17	Supply and install wall/window type exhaust fans of approved manufacture (European type or equal) complete with self – act automatic shutter. Price includes galvanized ducts, grills, shutter and making necessary holes in walls or glass and fixing, and wiring cables all as per specifications, and approval of supervisor engineer. The fan shall have it is own electrical wiring inside walls or ceiling, one socket/key etc. The price shall include any excavation, painting, plastering etc. all as shown in drawings, specifications, and approval of supervisor engineer. Extract Fan, 100 CFM	No.	4		
7.4	Rehabilitation of existing WASH units Students				
A. Civil Works					
7.4.1	Supply and Build Concrete Block Walls, 'Grade 35' of any size blocks single or cavity. The measurements will be to one side only all done according to the dwg. specifications and Engineer instructions and approval. Hollow blocks 10 cm thick for the partition walls. Price shall also include Supply and Cast Reinforced Concrete Grade 'B250 With a minimum cement content of 300 Kg. per cubic meter. Price also to include shuttering, reinforcing 4Ø10 and stirrups 1Ø8@25cm, and all related works according to drawings and specifications and engineer instructions. For the beams 20cmX 10cm above Hollow blocks	M <sup>2</sup>	6.0		
7.4.2	Supply and paint three coats polycide paint for ceilings including corridor ceilings of high quality (Approved by Palestine Standards Institution) and by the supervision engineer.	M <sup>2</sup>	36		
7.4.3	Supply and paint high quality emulsion paint, for top walls and internal drop beams (sides and bottom), on one priming coat and two finishing coats, using two coats of complete putty, as per satisfaction of the supervisor engineer.	M <sup>2</sup>	20		
7.4.4	Supply and Fix Factory-made Steel Doors as per drawings, specification. Price to include frame ( door) (as per details), fixing completely, ironmongery, cylinders, cylindrical locks handles (Approved by Palestine Standards Institution). 6 mm. glazing, gaskets, oil Paint in three coats in addition to two primer coats. A 40cm x 40cm sign made of Metal shall be fixed on the door. The sign should be colored and the icon and writing to be assigned by the supervision engineer.	No.	1		
7.4.5	Supply and Install Non-Slip Colored Ceramic Floor Tiles 0.6 cm Thickness. First choice and free from all defect grade "A". (Approved by Palestine Standards Institution). Price to include sand with cement filling (Grade B-100), pointing with white cement and cleaning on site, removal of the old tiles, leveling and all the necessary work to complete the job in accordance with the instructions of the supervision engineer.	M <sup>2</sup>	36		

<b>7.4.6</b>	Supply and Install White Glazed or colored Ceramic Wall Tiles 0.6 cm Thickness, First choice European type and free from all defects Grade "A". (Approved by Palestine Standards Institution). Price to include white round aluminum edges patching around services. Two coats of epoxy pointing ..All works shall be in accordance with drawings and specifications.	M <sup>2</sup>	118		
<b>7.4.7</b>	Supply, fix and operate non sliding Aluminum Windows extrusion Section 7700 or equal, with protective electrostatic applied polyester powder paint of 70-80 microns. In color of bronze. Price to include 6.38mm thick laminated glass (3+0.38+3mm) for double glass. float glazing and all other accessories and fittings to complete works as per drawings and specifications. Price shall include the steel protection from outside made of steel frame and steel wire mesh. Price shall also include painting, fixing etc.	M <sup>2</sup>	2.5		
<b>7.4.8</b>	Supply and install Local marble threshold for under Doors and under windows 3-4 cm thickness. All as per drawings, specifications and supervision engineer.	m2	4		
<b>7.4.9</b>	Supply and Fix Wooden Doors 4.5 cm Thick single or double sashes. With (Frame),(4.5*3.5) cm hardwood (Zan) edging and (3.5*9.5) cm soft wood stile. Edge strip banding of width 4.5 mm. Formica over veneer on both sides, color for frames and Architrave as directed by engineer. Door paneling to be soft wood 4.5*3.5 cm. each 4 cm., frames of galvanized steel sheet frame of 2mm thick for corridor doors ( as per drawings), width according to the wall thickness' and Allowance of 4 - 6 cm. thickness for plastering and tiling purposes, immersed in wood preservative before erection then embedded completely in sand - cement mortar and completely anchored as per specification. Architrave of Hardwood (Swedish)(4*1.2)cm, price to include ironmongery, kick plates of aluminum 20cm height from one side for main bath room doors, U shaped 10cm height from both sides at the bottom for internal doors kick plates of aluminum 20cm height for bath room doors, U shaped both sides, and at the bottom door stoppers, transparent fiber glass 6mm thick for both upper vision panel & for vision panel inside door leaf, gaskets cylindrical Lock ((Approved by Palestine Standards Institution), and painting in three coats of oil paint in addition to primer coat. Price includes also aluminum louvers of 50x60cm in the bottom for store doors. All as per Detailed Drawings, specification. Size as per drawings	No.	9		
<b>7.4.10</b>	Supply and Fix Wooden Doors 4.5 cm Thick single or double sashes. With Hardwood (Zan) Frame size (4.5*3.5) cm, and (3.5*9.5) cm soft wood stile. Edge strip banding of width 4.5 mm. Plywood veneer 5mm Thick on both sides. Door paneling to be soft wood 4.5*3.5 cm. each 4 cm., Frame of galvanized steel sheet frame of 2mm thick, width according to the wall thickness' and Allowance of 4 - 6 cm. thickness for plastering and tiling purposes, immersed in wood preservative before erection then embedded completely in sand - cement mortar and completely anchored as per specification. Price to include all the works including ironmongery, cylinders, locks, handles and paint.	No.	1		
<b>B. Electrical Works</b>					

	<p>Preamble: All Supplied Materials Should be Local Made (if available), Grade A and Free From Defects, Having Supervisor Certificate From Palestinian Standard Institution (PSI).</p> <p>Price to include submittal and obtaining approval of shop drawings, detailed and as-built drawings for all works as well as coordinating the same with the other services, activities and furniture.</p> <p>Price to include, also, submittal of catalogues and manufacturer instruction.</p> <p>Fixtures and appliances shall be measured in number. Supply and feeder Cables, cable conduits and cable trays shall not be measured but included in DB's prices</p> <p>Manholes, handholds and the like shall be measured in number. All Systems and devices shall be in lump sum including installation, testing and commissioning.</p> <p>Rates of fixtures and appliances shall include installation, wiring, switches and conduit works.</p> <p>All systems equipment (Class A and approved by Palestine Standards Institution)</p>				
7.4.11	<p><b>Lighting points</b></p> <p>Supply, Install and Connect Lighting Points including fire proof boxes fire proof Conduits, fire retardant (E90) 3*1.5 mm2 cables and 5*1.5mm2 for emergency kits, Light Switches, and all accessories as per drawings and specifications. Price to also include any necessary painting or tiling after connecting the points.</p>	SET No.	5		
7.4.12	<p><b>Lighting fixtures</b></p> <p>Supply, Install and Connect the following high frequency control gear Lighting Fixtures including P.F. correction capacitors, Lamps, installation for all lighting fixtures using galvanized iron chains to suspend the fixtures in the ceiling and all accessories as per drawings and specifications. Supply and install Surface mounted Type A or Type B as per drawings</p>	SET No.	5		
<b>C. Mechanical Works</b>					
	<p>Preamble. Supply networks pipes To Tanks, or from on roof feeding tanks to collectors shall be priced in Linear meter. Water tanks shall be measured in number. , Sanitary Fixtures shall be measured in number, price to include cold and hot water pipes supply and fittings to collectors, also to include drain supply , fittings connection, to manholes. Drains, Floor Traps, Clean outs and the like shall be measured in number.</p> <p>Internal sanitary sewers network shall be included in the rates of sanitary fixtures and appliances. and the sanitary fixtures includes the cost of poexgol pipes for basins, toilets, science lab basins, home economics basins, ..etc., price also includes the connection to drainage network of these fixtures in sanitary units and labs. Vents and vertical stacks shall measured in linear meter. Manhole, Galleys and the like shall be measured in number. External sewers pipes shall be measured in linear meter for each individual diameter and material. Rates of all fittings , fixtures , appliances and pipe laying shall include:- Supply of material, workmanship, installation, testing and commissioning. Rates to include also all peace's and fittings, including by passes , floats, cleaning outlets , automatic vents, vents and stack covers, valves and non return valves and the like needed to complete works as per specifications. Insulation and painting as called for in specifications. Excavation and cutting for all pipe laying works, bedding back filling and all works connected with pipe laying. All ties, sleeves, joints, tie bolts and rods, brackets and the like. Rates to include Workshops, Coordinated and as- built drawings as approved by the Engineer. , the contractor should submit best quality, approved two brands for each mechanical works items for approval, and should be approved by PSI, any cut in blocks for installations should be done using special cutting machine, (all mechanical materials as sanitary fixtures fixtures, devices should be Italy made, Germany, Spanish made or equivalent )</p>				



<b>7.4.13</b>	Remove the old Arabic style toilets and supply & Install Porcelain W.C. bowl class "A" white or colored , (Italy, Spanish made or equivalent) with heavy duty seat and cover. Price includes plastic flush tank, hanging iron steel bracket, bolts and nuts, as well as flexible flush hose , valve, porcelain paper holder, connection to pexogol pipe, connection to drainage and all related materials. Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include complete removal of the old toilets, replacement of any broken tiles, broken valves and then supplying new Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings as per specifications , drawing and as directed by supervision engineer.	Complete Set	4		
<b>7.4.14</b>	Remove the old Arabic Style toilet and supply & Install a new one with all its accessories. Price includes plastic flush tank, hanging iron steel bracket, bolts and nuts, as well as flexible flush hose , valve, porcelain paper holder, connection to pexogol pipe, connection to drainage and all related materials. Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include complete removal of the old toilets, replacement of any broken tiles, broken valves and then supplying new Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings as per specifications , drawing and as directed by supervision engineer.	Complete Set	4		

7.4.15	Supply & Install Porcelain wall hung wash basin white or colored engineer of size 50 x 45 cm of approved brand (Italy, Spanish made or equivalent), Price shall include chromium plated mixer with chromium plated handle mounted on wall. the price also includes connection to Pexogol pipe, liquide soap holder , and all fixation and hanging bracket. Price includes supplying and installing 40x60cm mirror., semi pedestal and all other required materials, including connection to drainage system.	Complete Set	3		
7.4.18	Supply and install wall/window type exhaust fans of approved manufacture (European type or equal) complete with self – act automatic shutter. Price includes galvanized ducts, grills, shutter and making necessary holes in walls or glass and fixing, and wiring cables all as per specifications, and approval of supervisor engineer. The fan shall have it is own electrical wiring inside walls or ceiling, one soket/key etc. The price shall include any excavation, painting, plastering etc. all as shown in drawings, specifications, and approval of supervisor engineer. Extract Fan, 100 CFM	No.	4		
7.4.19	Supply and install floor cleanout 4" UPVC including stainless steel (sraled type) cover (15*15cm) complete with connection to drain pipes as located in drawings, specifications and approval of supervisor engineer	No.	1		
7.5	<b>Rehabilitation of existing WASH units Male Teahcers</b>				
	Preamble. Supply networks pipes To Tanks, or from on roof feeding tanks to collectors shall be priced in Linear meter. Water tanks shall be measured in number. , Sanitary Fixtures shall be measured in number, price to include cold and hot water pipes supply and fittings to collectors, also to include drain supply , fittings connection, to manholes. Drains, Floor Traps, Clean outs and the like shall be measured in number. Internal sanitary sewers network shall be included in the rates of sanitary fixtures and appliances. and the sanitary fixtures includes the cost of poexgol pipes for basins, toilets, science lab basins, home economics basins, ..etc., price also includes the connection to drainage network of these fixtures in sanitary units and labs. Vents and vertical stacks shall measured in linear meter. Manhole, Galleys and the like shall be measured in number. External sewers pipes shall be measured in linear meter for each individual diameter and material. Rates of all fittings , fixtures , appliances and pipe laying shall include:- Supply of material, workmanship, installation, testing and commissioning. Rates to include also all peace's and fittings, including by passes , floats, cleaning outlets , automatic vents, vents and stack covers, valves and non return valves and the like needed to complete works as per specifications. Insulation and painting as called for in specifications. Excavation and cutting for all pipe laying works, bedding back filling and all works connected with pipe laying. All ties, sleeves, joints, tie bolts and rods, brackets and the like. Rates to include Workshops, Coordinated and as- built drawings as approved by the Engineer. , the contractor should submit best quality, approved two brands for each mechanical works items for approval, and should be approved by PSI, any cut in blocks for installations should be done using special cutting machine, (all mechanical materials as sanitary fixtures fixtures, devices should be Italy made, Germany, Spanish made or equivalent )				
7.4.21	Rehabilitation, replace and Supply & Install Porcelain W.C. bowl class "A" white or colored , (Italy, Spanish made or equivalent) with heavy duty seat and cover. Price includes plastic flush tank, hanging iron steel bracket, bolts and nuts, as well as flexible flush hose , valve, porcelain paper holder, connection to pexogol pipe, connection to drainage and all related materials. Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include complete removal of the old toilets, replacement of any broken tiles, broken valves and then supplying new Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings as per specifications , drawing and as directed by supervision engineer.	Complete Set	1		

<b>7.4.22</b>	Remove the old Arabic Style toilets and supply & Install a new one with all its accessories. Price includes plastic flush tank, hanging iron steel bracket, bolts and nuts, as well as flexible flush hose , valve, porcelain paper holder, connection to pexogol pipe, connection to drainage and all related materials. Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include complete removal of the old toilets, replacement of any broken tiles, broken valves and then supplying new Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings as per specifications , drawing and as directed by supervision engineer.	Complete Set	1		
<b>7.4.23</b>	Rehabilitation, replace and Supply & Install Porcelain wall hung wash basin white or colored engineer of size 50 x 45 cm of approved brand (Italy, Spanish made or equivalent), Price shall include chromium plated mixer with chromium plated handle mounted on wall. the price also includes connection to Pexogol pipe, liquide soap holder , and all fixation and hanging bracket. Price includes supplying and installing 40x60cm mirror., semi pedestal and all other required materials, including connection to drainage system.	Complete Set	1		
<b>7.4.24</b>	Supply and install wall/window type exhaust fans of approved manufacture (European type or equal) complete with self – act automatic shutter. Price includes galvanized ducts, grills, shutter and making necessary holes in walls or glass and fixing, and wiring cables all as per specifications, and approval of supervisor engineer. The fan shall have it is own electrical wiring inside walls or ceiling, one soket/key etc. The price shall include any excavation, painting, plastering etc. all as shown in drawings, specifications, and approval of supervisor engineer. Extract Fan, 100 CFM	No.	2		
<b>Total Ali Bin Abi Taleb Secondary boys School (NIS)</b>					

BILLS OF QUANTITIES					
CONSULTANT: Universal Group for Engineering and Consulting			DATE: March 2023		
Marda Secondary Boys School					
ITEM No.	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (ILS)	AMOUNT (ILS)
8.1	Preliminary Items				
8.1.1	Supply and installation of the project marble sign (110 cm x 70cm) that include colored project information. The Contractor shall do the design and fix the sign as per the supervision engineer instructions. The price shall include fixing the sign properly with all required drilling, jumbo bolts, rehabilitation of any damages occurred during fixation.	No.	1		
8.1.2	Demolishing works inside the WASH facilities (WCs) that intersects with the designed structure in accordance with the drawings. The price shall include demolishing but not limited to all inside partition walls, stalls, floors Tiles, Wall Tiles, electrical wires, lighting Points, Collectors, Sockets, Outlets, toilets, squatting toilets, windows, under tiles sewerage pipes/network, internal water supply network, etc. all as per drawings, and supervision engineer instructions. The price shall also includes demolish or removal of all obstacles, excavation, leveling etc. all as per drawings, and supervision engineer instructions. The price shall include remove all demolished materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
8.1.3	Remove carefully works inside the WASH facilities (WCs). The price shall include but not limited to remove carefully, main doors, WC doors, sinks, wash basins, lighting Points, Collectors, accessories, taps, etc. all as per drawings, and Engineer instructions. The Contractor shall transport all removed materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
8.2	External Works				
8.2.1	<b>Drinking Fountain Works:</b> Supply and install outside drinking fountain as shown on drawings, rate includes, sink 4.35X0.75m on block stands, the work should be finished and completed to the highest standard. Rate include excavation, B200 R. concrete (all steel reinforcement required), stone works, plastering, glazing tiles, local marble coping, planters and metal cover with all fittings, 8 unit high quality (Class A and approved by Palestine Standards Institution) chrome plated taps of approved kind, rates also include p.v.c. Drainpipe outlet to green area or as per drawings.	L.S	1		
8.2.2	<b>Awning Works</b> Supply and install steel awning at one location or several location as per the detail in the drawing and as per supervision engineer. The price shall also include all steel tubes (columns, horizontal, vertical etc.), steel corrugated sheets, drain gutters, steel bolts, excavation, backfilling, reinforced concrete foundations, reinstatement, 3 Inch galvanized Steel rain water, painting, the fixation, joints, angles and whatever necessary to complete the work in accordance with the drawings, specifications and to the approval of the supervision engineer. Price to include any required works including but not limited to, sealant works, fixing, fastening, welding etc. The Hight of the awning as per drawings or 3.5 meter if not mentioned. The final location or several locations of awning will be fixed during the shop drawing phase and as instructed by the supervision engineer, the Contractor shall not claim for additional cost or object.	m2	25		

<b>8.3</b>	<b>Rehabilitation of existing WASH units</b>				
<b>A. Civil Works</b>					
<b>8.3.1</b>	Supply and Build Concrete Block Walls, 'Grade 35' of any size blocks single or cavity. The measurements will be to one side only all done according to the dwg. specifications and Engineer instructions and approval. Hollow blocks 10 cm thick for the partition walls. Price shall also include Supply and Cast Reinforced Concrete Grade 'B250 With a minimum cement content of 300 Kg. per cubic meter. Price also to include shuttering, reinforcing 4Ø10 and stirrups 1Ø8@25cm, and all related works according to drawings and specifications and engineer instructions. For the beams 20cmX 10cm above Hollow blocks	M <sup>2</sup>	9.0		
<b>8.3.2</b>	Supply and paint three coats polycide paint for ceilings including corridor ceilings of high quality (Approved by Palestine Standards Institution) and by the supervision engineer.	M <sup>2</sup>	38		
<b>8.3.3</b>	Supply and paint high quality emulsion paint, for top walls and internal drop beams (sides and bottom), on one priming coat and two finishing coats, using two coats of complete putty, as per satisfaction of the supervisor engineer.	M <sup>2</sup>	19		
<b>8.3.4</b>	Supply and Fix Factory-made Steel Doors as per drawings, specification. Price to include frame (door) (as per details), fixing completely, ironmongery, cylinders, cylindrical locks handles (Approved by Palestine Standards Institution). 6 mm. glazing, gaskets, oil Paint in three coats in addition to two primer coats. A 40cm x 40cm sign made of Metal shall be fixed on the door. The sign should be colored and the icon and writing to be assigned by the supervision engineer, Dimensions: 1m *2.0m	No.	1		
<b>8.3.5</b>	Supply and Install Non-Slip Colored Ceramic Floor Tiles 0.6 cm Thickness. First choice and free from all defect grade "A". (Approved by Palestine Standards Institution). Price to include sand with cement filling (Grade B-100), pointing with white cement and cleaning on site, removal of the old tiles, leveling and all the necessary work to complete the job in accordance with the instructions of the supervision engineer.	M <sup>2</sup>	38		
<b>8.3.6</b>	Supply and Install White Glazed or colored Ceramic Wall Tiles 0.6 cm Thickness, First choice European type and free from all defects Grade "A". (Approved by Palestine Standards Institution). Price to include white round aluminum edges patching around services. Two coats of epoxy pointing ..All works shall be in accordance with drawings and specifications.	M <sup>2</sup>	50		
<b>8.3.7</b>	Supply and install Local marble threshold for under Doors 3-4 cm thickness. All as per drawings, specifications and supervsion engineer.	m2	7		

<b>8.3.8</b>	Supply and Fix Wooden Doors 4.5 cm Thick single or double sashes. With (Frame),(4.5*3.5) cm hardwood (Zan) edging and (3.5*9.5) cm soft wood stile. Edge strip banding of width 4.5 mm. Formica over veneer on both sides, color for frames and Architrave as directed by engineer. Door paneling to be soft wood 4.5*3.5 cm. each 4 cm., frames of galvanized steel sheet frame of 2mm thick for corridor doors ( as per drawings), width according to the wall thickness' and Allowance of 4 - 6 cm. thickness for plastering and tiling purposes, immersed in wood preservative before erection then embedded completely in sand - cement mortar and completely anchored as per specification. Architrave of Hardwood (Swedish)(4*1.2)cm, price to include ironmongery, kick plates of aluminum 20cm height from one side for main bath room doors, U shaped 10cm height from both sides at the bottom for internal doors kick plates of aluminum 20cm height for bath room doors, U shaped both sides, and at the bottom door stoppers, transparent fiber glass 6mm thick for both upper vision panel & for vision panel inside door leaf, gaskets cylindrical Lock ((Approved by Palestine Standards Institution), and painting in three coats of oil paint in addition to primer coat. Price includes also aluminum louvers of 50x60cm in the bottom for store doors. All as per Detailed Drawings, specification. Size as per drawings	No.	5		
<b>8.3.9</b>	Supply and Fix Wooden Doors 4.5 cm Thick single or double sashes. With Hardwood (Zan) Frame size (4.5*3.5) cm, and (3.5*9.5) cm soft wood stile. Edge strip banding of width 4.5 mm. Plywood veneer 5mm Thick on both sides. Door paneling to be soft wood 4.5*3.5 cm. each 4 cm. Frame of galvanized steel sheet frame of 2mm thick, width according to the wall thickness' and Allowance of 4 - 6 cm. thickness for plastering and tiling purposes, immersed in wood preservative before erection then embedded completely in sand - cement mortar and completely anchored as per specification. Price to include all the works including ironmongery, cylinders, locks, handles and paint.	No.	1		
<b>B. Electrical Works</b>					
	Preamble: All Supplied Materials Should be Local Made (if available), Grade A and Free From Defects, Having Supervisor Certificate From Palestinian Standard Institution (PSI). Price to include submittal and obtaining approval of shop drawings, detailed and as-built drawings for all works as well as coordinating the same with the other services, activities and furniture. Price to include, also, submittal of catalogues and manufacturer instruction. Fixtures and appliances shall be measured in number. Supply and feeder Cables, cable conduits and cable trays shall not be measured but included in DB's prices Manholes, handholds and the like shall be measured in number. All Systems and devices shall be in lump sum including installation, testing and commissioning. Rates of fixtures and appliances shall include installation, wiring, switches and conduit works. All systems equipment (Class A and approved by Palestine Standards Institution)				
<b>8.3.10</b>	<b>Lighting points</b> Supply, Install and Connect Lighting Points including fire proof boxes fire proof Conduits, fire retardant (E90) 3*1.5 mm2 cables and 5*1.5mm2 for emergency kits, Light Switches, and all accessories as per drawings and specifications. Price to also include any necessary painting or tiling after connecting the points.	SET No.	5		
<b>8.3.11</b>	<b>Lighting fixtures</b> Supply, Install and Connect the following high frequency control gear Lighting Fixtures including P.F. correction capacitors, Lamps, installation for all lighting fixtures using galvanized iron chains to suspend the fixtures in the ceiling and all accessories as per drawings and specifications. Supply and install Surface mounted Type A or Type B as per drawings	SET No.	5		
<b>C. Mechanical Works</b>					

	<p>Preamble. Supply networks pipes To Tanks, or from on roof feeding tanks to collectors shall be priced in Linear meter. Water tanks shall be measured in number. , Sanitary Fixtures shall be measured in number, price to include cold and hot water pipes supply and fittings to collectors, also to include drain supply , fittings connection, to manholes. Drains, Floor Traps, Clean outs and the like shall be measured in number.</p> <p>Internal sanitary sewers network shall be included in the rates of sanitary fixtures and appliances. and the sanitary fixtures includes the cost of poexgol pipes for basins, toilets, science lab basins, home economics basins, ..etc., price also includes the connection to drainage network of these fixtures in sanitary units and labs. Vents and vertical stacks shall measured in linear meter. Manhole, Galleys and the like shall be measured in number. External sewers pipes shall be measured in linear meter for each individual diameter and material. Rates of all fittings , fixtures , appliances and pipe laying shall include:- Supply of material, workmanship, installation, testing and commissioning. Rates to include also all peace's and fittings, including by passes , floats, cleaning outlets , automatic vents, vents and stack covers, valves and non return valves and the like needed to complete works as per specifications. Insulation and painting as called for in specifications. Excavation and cutting for all pipe laying works, bedding back filling and all works connected with pipe laying. All ties, sleeves, joints, tie bolts and rods, brackets and the like. Rates to include Workshops, Coordinated and as- built drawings as approved by the Engineer. , the contractor should submit best quality, approved two brands for each mechanical works items for approval, and should be approved by PSI, any cut in blocks for installations should be done using special cutting machine, (all mechanical materials as sanitary fixtures fixtures, devices should be Italy made, Germany, Spanish made or equivalent )</p>				
<b>8.3.12</b>	<p>Remove the old toilets and supply &amp; Install Porcelain W.C. bowl class "A" white or colored , (Italy, Spanish made or equivalent) with heavy duty seat and cover. Price includes plastic flush tank, hanging iron steel bracket, bolts and nuts, as well as flexible flush hose , valve, porcelain paper holder, connection to pexogol pipe, connection to drainage and all related materials. Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include complete removal of the old toilets, replacement of any broken tiles, broken valves and then supplying new Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings as per specifications , drawing and as directed by supervision engineer.</p>	Complete Set	5		
<b>8.3.13</b>	<p>Supply &amp; Install Porcelain wall hung wash basin white or colored engineer of size 50 x 45 cm of approved brand (Italy, Spanish made or equivalent), Price shall include chromium plated mixer with chromium plated handle mounted on wall. the price also includes connection to Pexogol pipe, liquide soap holder , and all fixation and hanging bracket. Price includes supplying and installing 40x60cm mirror., semi pedestal and all other required materials, including connection to drainage system.</p>	Complete Set	5		
<b>8.3.14</b>	<p>Supply and Install White Vitreous Western type handicapped Toilet (Class A and approved by Palestine Standards Institution) Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings, accessories movable handle and fixed handle as shown on drawings and in Specifications. as per specifications , drawing and as directed by supervision Engineer.</p>	Complete Set	1		
<b>8.3.15</b>	<p>Supply and Install White Vitreous China handicapped Wash Basin(sliding type) (Class A and approved by Palestine Standards Institution), size (40 * 56) cm. Complete with all fittings, valves, waste pipes to nearest floor trap, taps or mixer (Class A and approved by Palestine Standards Institution), connection to water distribution, traps, and any other necessary parts as Specification and as directed by Eng. Price includes supplying and installing 40x60cm mirror. Gear tap.</p>	Complete Set	1		

<b>8.3.16</b>	Supply and install wall/window type exhaust fans of approved manufacture (European type or equal) complete with self – act automatic shutter. Price includes galvanized ducts, grills, shutter and making necessary holes in walls or glass and fixing, and wiring cables all as per specifications, and approval of supervisor engineer. The fan shall have it is own electrical wiring inside walls or ceiling, one socket/key etc. The price shall include any excavation, painting, plastering etc. all as shown in drawings, specifications, and approval of supervisor engineer. Extract Fan, 100 CFM	No.	6		
<b>8.3.17</b>	Supply and install floor cleanout 4" UPVC including stainless steel (sraled type) cover (15*15cm) complete with connection to drain pipes as located in drawings, specifications and approval of supervisor engineer	No.	2		
<b>8.3.18</b>	Supply and install floor trap/drain 4" UPVC including stainless steel (sraled type) cover (15*15cm) complete with connection to drain pipes as located in drawings, specifications and approval of supervisor engineer	No.	6		
<b>Total Marda Secondary Boys School (NIS)</b>					



BILLS OF QUANTITIES					
CONSULTANT: Universal Group for Engineering and Consulting			DATE: March 2023		
Qarawa Preparatory Girls School					
ITEM No.	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (ILS)	AMOUNT (ILS)
9.1	Preliminary Items				
9.1.1	Supply and installation of the project marble sign (110 cm x 70cm) that include coloured project information. The Contractor shall do the design and fix the sign as per the supervision engineer instructions. The price shall include fixing the sign properly with all required drilling, jumbo bolts, rehabilitation of any damages occurred during fixation.	No.	1		
9.1.2	Demolishing works inside the WASH facilities (WCs) that intersects with the designed structure in accordance with the drawings. The price shall include demolishing but not limited to all inside partition walls, stalls, floors Tiles, Wall Tiles, electrical wires, lighting Points, Collectors, Sockets, Outlets, toilets, squatting toilets, windows, under tiles sewerage pipes/network, internal water supply network, etc. all as per drawings, and supervision engineer instructions. The price shall also includes demolish or removal of all obstacles, excavation, levelling etc. all as per drawings, and supervision engineer instructions. The price shall include remove all demolished materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
9.1.3	Remove carefully works inside the WASH facilities (WCs). The price shall include but not limited to remove carefully, main doors, WC doors, sinks, wash basins, lighting Points, Collectors, accessories, taps, etc. all as per drawings, and Engineer instructions. The Contractor shall transport all removed materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
9.1.4	<b>Door and windows Opening in Reinforced Concrete or Hollow Block</b> Allow for every expenses to make a door opening in RE concrete wall. The price shall also include all needed works to complete the works as per drawings, specifications and engineer instructions. The Contractor shall transport all removed materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
9.2	External Works				
9.2.1	<b>Drinking Fountain Works:</b> Supply and install outside drinking fountain as shown on drawings, rate includes, sink 4.35X0.75m on block stands, the work should be finished and completed to the highest standard. Rate include excavation, B200 R. concrete (all steel reinforcement required), stone works, plastering, glazing tiles, local marble coping, planters and metal cover with all fittings, 8 unit high quality (Class A and approved by Palestine Standards Institution) chrome plated taps of approved kind, rates also include p.v.c. Drainpipe outlet to green area or as per drawings.	L.S	1		
9.2.2	<b>Awning Works</b> Supply and install steel awning at one location or several location as per the detail in the drawing and as per supervision engineer. The price shall also include all steel tubes (columns, horizontal, vertical etc.), steel corrugated sheets, drain gutters, steel bolts, excavation, backfilling, reinforced concrete foundations, reinstatement, 3 Inch galvanized Steel rain water, painting, the fixation, joints, angles and whatever necessary to complete the work in accordance with the drawings, specifications and to the approval of the supervision engineer. Price to include any required works including but not limited to, sealant works, fixing, fastening, welding etc. The Hight of the awning as per drawings or 3.5 meter if not mentioned. The final location or several locations of awning will be fixed during the shop drawing phase and as instructed by the supervision engineer, the Contractor shall not claim for additional cost or object.	m2	25		

9.2.3	<p><b>Handicap Ramp Works:</b>  Supply and Build handicap ramp made from Reinforced Concrete. The price shall include excavation, backfilling, reinstatement, demolish of all obstacles, steel reinforcement, reinforced concrete for ground beam and slab, hollow block wall, 5 cm natural stone tiles, compacted base Corse etc., in accordance with the drawings, details, specifications and to the instructions of the supervision engineer. Handrails of 50mm steel pipes and to include Fixing completely, oil paint three coats in addition to primer coat the hand rails are to be on both sides of the ramp. Price to also include cheered plate, and PVC rubber to the height 2m to the columns. The Contractor to submit shop drawings and details to be approved by the Engineers. Price includes cleaning, plastering and painting the wall adjacent to the newly installed ramp.</p>	L.S	1		
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<b>9.3</b>	<b>Rehabilitation of existing WASH units</b>				
<b>A. Civil Works</b>					
<b>9.3.1</b>	Supply and Build Concrete Block Walls, 'Grade 35' of any size blocks single or cavity. The measurements will be to one side only all done according to the dwg. specifications and Engineer instructions and approval. Hollow blocks 10 cm thick for the partition walls. Price shall also include Supply and Cast Reinforced Concrete Grade 'B250 With a minimum cement content of 300 Kg. per cubic meter. Price also to include shuttering, reinforcing 4Ø10 and stirrups 1Ø8@25cm, and all related works according to drawings and specifications and engineer instructions. For the beams 20cmX 10cm above Hollow blocks	M <sup>2</sup>	8.0		
<b>9.3.2</b>	Supply and paint three coats polycide paint for ceilings including corridor ceilings of high quality (Approved by Palestine Standards Institution) and by the supervision engineer.	M <sup>2</sup>	54		
<b>9.3.3</b>	Supply and paint high quality emulsion paint, for top walls and internal drop beams (sides and bottom), on one priming coat and two finishing coats, using two coats of complete putty, as per satisfaction of the supervisor engineer.	M <sup>2</sup>	43		
<b>9.3.4</b>	Supply and Fix Factory-made Doors as per drawings, specification. Price to include frame (door) (as per details), fixing completely, ironmongery, cylinders, cylindrical locks handles (Approved by Palestine Standards Institution). 6 mm. glazing, gaskets, oil Paint in three coats in addition to two primer coats. A 40cm x 40cm sign made of Metal shall be fixed on the door. The sign should be coloured and the icon and writing to be assigned by the supervision engineer, Dimensions: 1m *2.0m	No.	2		
<b>9.3.5</b>	Supply and Install Non-Slip Coloured Ceramic Floor Tiles 0.6 cm Thickness. First choice and free from all defect grade "A". (Approved by Palestine Standards Institution). Price to include sand with cement filling (Grade B-100), pointing with white cement and cleaning on site, removal of the old tiles, levelling and all the necessary work to complete the job in accordance with the instructions of the supervision engineer.	M <sup>2</sup>	10		
<b>9.3.6</b>	Supply and Install White Glazed or coloured Ceramic Wall Tiles 0.6 cm Thickness, First choice European type and free from all defects Grade "A". (Approved by Palestine Standards Institution). Price to include white round aluminium edges patching around services. Two coats of epoxy pointing ..All works shall be in accordance with drawings and specifications.	M <sup>2</sup>	15		
<b>9.3.7</b>	Supply, fix and operate non sliding Aluminium Windows extrusion Section 7700 or equal, with protective electrostatic applied polyester powder paint of 70-80 microns. Price to include 6.38mm thick laminated glass (3+0.38+3mm) for double glass. float glazing and all other accessories and fittings to complete works as per drawings and specifications. Price shall include the steel protection from outside made of steel frame and steel wire mesh. Price shall also include painting, fixing etc.	M <sup>2</sup>	6.0		
<b>9.3.8</b>	Supply and install Local marble threshold for under Doors and under windows 3-4 cm thickness. All as per drawings, specifications and supervision engineer.	m2	8		

9.3.9	Supply and Fix Wooden Doors 4.5 cm Thick single or double sashes. With (Frame),(4.5*3.5) cm hardwood (Zan) edging and (3.5*9.5) cm soft wood stile. Edge strip banding of width 4.5 mm. Formica over veneer on both sides, colour for frames and Architrave as directed by engineer. Door paneling to be soft wood 4.5*3.5 cm. each 4 cm., frames of galvanized steel sheet frame of 2mm thick for corridor doors ( as per drawings), width according to the wall thickness' and Allowance of 4 - 6 cm. thickness for plastering and tiling purposes, immersed in wood preservative before erection then embedded completely in sand - cement mortar and completely anchored as per specification. Architrave of Hardwood (Swedish)(4*1.2)cm, price to include ironmongery, kick plates of aluminium 20cm height from one side for main bath room doors, U shaped 10cm height from both sides at the bottom for internal doors kick plates of aluminium 20cm height for bath room doors, U shaped both sides, and at the bottom door stoppers, transparent fiber glass 6mm thick for both upper vision panel & for vision panel inside door leaf, gaskets cylindrical Lock ((Approved by Palestine Standards Institution), and painting in three coats of oil paint in addition to primer coat. Price includes also aluminium louvers of 50x60cm in the bottom for store doors. All as per Detailed Drawings, specification. Size as per drawings	No.	12		
9.3.10	Supply and Fix Wooden Doors 4.5 cm Thick single or double sashes. With Hardwood (Zan) Frame size (4.5*3.5) cm, and (3.5*9.5) cm soft wood stile. Edge strip banding of width 4.5 mm. Plywood veneer 5mm Thick on both sides. Door paneling to be soft wood 4.5*3.5 cm. each 4 cm. Frame of galvanized steel sheet frame of 2mm thick, width according to the wall thickness' and Allowance of 4 - 6 cm. thickness for plastering and tiling purposes, immersed in wood preservative before erection then embedded completely in sand - cement mortar and completely anchored as per specification. Price to include all the works including ironmongery, cylinders, locks, handles and paint.	No.	1		
<b>B. Electrical Works</b>					
	Preamble: All Supplied Materials Should be Local Made (if available), Grade A and Free From Defects, Having Supervisor Certificate From Palestinian Standard Institution (PSI). Price to include submittal and obtaining approval of shop drawings, detailed and as-built drawings for all works as well as coordinating the same with the other services, activities and furniture. Price to include, also, submittal of catalogues and manufacturer instruction. Fixtures and appliances shall be measured in number. Supply and feeder Cables, cable conduits and cable trays shall not be measured but included in DB's prices Manholes, handholds and the like shall be measured in number. All Systems and devices shall be in lump sum including installation, testing and commissioning. Rates of fixtures and appliances shall include installation, wiring, switches and conduit works. All systems equipment (Class A and approved by Palestine Standards Institution)				
9.3.11	<b>Lighting points</b> Supply, Install and Connect Lighting Points including fire proof boxes fire proof Conduits, fire retardant (E90) 3*1.5 mm2 cables and 5*1.5mm2 for emergency kits, Light Switches, and all accessories as per drawings and specifications. Price to also include any necessary painting or tiling after connecting the points.	SET No.	6		
9.3.12	<b>Lighting fixtures</b> Supply, Install and Connect the following high frequency control gear Lighting Fixtures including P.F. correction capacitors, Lamps, installation for all lighting fixtures using galvanized iron chains to suspend the fixtures in the ceiling and all accessories as per drawings and specifications. Supply and install 30X120 cm 34W/3700lm LED recessed modular panel with aluminium frame and opal diffuser, colour temp. 4000K UGR<19, IP40	SET No.	6		
<b>C. Mechanical Works</b>					

	<p>Preamble. Supply networks pipes To Tanks, or from on roof feeding tanks to collectors shall be priced in Linear meter. Water tanks shall be measured in number. , Sanitary Fixtures shall be measured in number, price to include cold and hot water pipes supply and fittings to collectors, also to include drain supply , fittings connection, to manholes. Drains, Floor Traps, Clean outs and the like shall be measured in number.</p> <p>Internal sanitary sewers network shall be included in the rates of sanitary fixtures and appliances. and the sanitary fixtures includes the cost of poexgol pipes for basins, toilets, science lab basins, home economics basins, ..etc., price also includes the connection to drainage network of these fixtures in sanitary units and labs. Vents and vertical stacks shall measured in linear meter. Manhole, Galleys and the like shall be measured in number. External sewers pipes shall be measured in linear meter for each individual diameter and material. Rates of all fittings , fixtures , appliances and pipe laying shall include:- Supply of material, workmanship, installation, testing and commissioning. Rates to include also all peace's and fittings, including by passes , floats, cleaning outlets , automatic vents, vents and stack covers, valves and non return valves and the like needed to complete works as per specifications. Insulation and painting as called for in specifications. Excavation and cutting for all pipe laying works, bedding back filling and all works connected with pipe laying. All ties, sleeves, joints, tie bolts and rods, brackets and the like. Rates to include Workshops, Coordinated and as- built drawings as approved by the Engineer. , the contractor should submit best quality, approved two brands for each mechanical works items for approval, and should be approved by PSI, any cut in blocks for installations should be done using special cutting machine, (all mechanical materials as sanitary fixtures fixtures, devices should be Italy made, Germany, Spanish made or equivalent )</p>				
9.3.14	<p>Remove the old toilets and/or supply &amp; Install new Porcelain W.C. bowl class "A" white or coloured, (Italy, Spanish made or equivalent) with heavy duty seat and cover. Price includes plastic flush tank, hanging iron steel bracket, bolts and nuts, as well as flexible flush hose , valve, porcelain paper holder, connection to pexogol pipe, connection to drainage and all related materials. Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include complete removal of the old toilets, replacement of any broken tiles, broken valves and then supplying new Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings as per specifications , drawing and as directed by supervision engineer.</p>	Complete Set	12		
9.3.15	<p>Supply &amp; Install new Porcelain W.C. bowl class "A" for KG white or coloured, (Italy, Spanish made or equivalent) with heavy duty seat and cover. Price includes plastic flush tank, hanging iron steel bracket, bolts and nuts, as well as flexible flush hose , valve, porcelain paper holder, connection to pexogol pipe, connection to drainage and all related materials. Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include complete removal of the old toilets, replacement of any broken tiles, broken valves and then supplying new Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings as per specifications , drawing and as directed by supervision engineer.</p>	Complete Set	1		
9.3.16	<p>Supply &amp; Install Porcelain wall hung wash basin for KG white or coloured engineer of size 50 x 45 cm of approved brand (Italy, Spanish made or equivalent), Price shall include chromium plated mixer with chromium plated handle mounted on wall. the price also includes connection to Pexogol pipe, liquide soap holder , and all fixation and hanging bracket. Price includes supplying and installing 40x60cm mirror., semi pedestal and all other required materials, including connection to drainage system.</p>	Complete Set	1		
9.3.17	<p>Supply &amp; Install Porcelain wall hung wash basin white or coloured engineer of size 50 x 45 cm of approved brand (Italy, Spanish made or equivalent), Price shall include chromium plated mixer with chromium plated handle mounted on wall. the price also includes connection to Pexogol pipe, liquide soap holder , and all fixation and hanging bracket. Price includes supplying and installing 40x60cm mirror., semi pedestal and all other required materials, including connection to drainage system.</p>	Complete Set	7		

<b>9.3.18</b>	Supply and Install White Vitreous Western type handicapped Toilet (Class A and approved by Palestine Standards Institution) Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings, accessories movable handle and fixed handle as shown on drawings and in Specifications. as per specifications , drawing and as directed by supervision Engineer.	Complete Set	1		
<b>9.3.19</b>	Supply and Install White Vitreous China handicapped Wash Basin(sliding type) (Class A and approved by Palestine Standards Institution), size (40 * 56) cm. Complete with all fittings, valves, waste pipes to nearest floor trap, taps or mixer (Class A and approved by Palestine Standards Institution), connection to water distribution, traps, and any other necessary parts as Specification and as directed by Eng. Price includes supplying and installing 40x60cm mirror. Gear tap.	Complete Set	1		
<b>9.3.20</b>	Supply and install wall/window type exhaust fans of approved manufacture (European type or equal) complete with self – act automatic shutter. Price includes galvanized ducts, grills, shutter and making necessary holes in walls or glass and fixing, and wiring cables all as per specifications, and approval of supervisor engineer. The fan shall have it is own electrical wiring inside walls or ceiling, one socket/key etc. The price shall include any excavation, painting, plastering etc. all as shown in drawings, specifications, and approval of supervisor engineer. Extract Fan, 100 CFM	No.	6		
<b>9.3.21</b>	Supply and install floor cleanout 4" UPVC including stainless steel (sraled type) cover (15*15cm) complete with connection to drain pipes as located in drawings, specifications and approval of supervisor engineer	No.	1		
<b>Total Qarawa Preparatory Girls School (NIS)</b>					

BILLS OF QUANTITIES					
CONSULTANT: Universal Group for Engineering and Consulting			DATE: March 2023		
Qarawa Preparatory Boys School					
ITEM No.	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (ILS)	AMOUNT (ILS)
10.1	Preliminary Items				
10.1.1	Supply and installation of the project marble sign (110 cm x 70cm) that include coloured project information. The Contractor shall do the design and fix the sign as per the supervision engineer instructions. The price shall include fixing the sign properly with all required drilling, jumbo bolts, rehabilitation of any damages occurred during fixation.	No.	1		
10.1.2	Remove carefully works inside the three WASH facilities (WCs). The price shall include but not limited to remove carefully, main doors, WC doors, sinks, wash basins, lighting Points, Collectors, accessories, taps, floor tiles and walls tiles etc. all as per drawings, and Engineer instructions. The Contractor shall transport all removed materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
10.1.3	<b>Door and windows Opening in Reinforced Concrete or Hollow Block</b> Allow for every expenses to make a door opening in RE concrete wall. The price shall also include all needed works to complete the works as per drawings, specifications and engineer instructions. The Contractor shall transport all removed materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
10.2	External Works				
10.2.1	<b>Drinking Fountain Works:</b> Remove the old Drinking Fountain and Supply and install outside drinking fountain as shown on drawings, rate includes, sink 6.1 m long on block stands as per detail, the work should be finished and completed to the highest standard. Rate include galvanized mesh fence with steel frame 2.5 diameter standard 0.5inch * 0.5 inch spacing for the mesh, hinges, metal angles, lock, reinforced concrete of 10cm thick with external plastering, sand and cement mortar, 20*20cm ceramic tiles, 2 inch pvc pipe, 10-cm cement blocks, 12 unit high quality (Class A and approved by Palestine Standards Institution) chrome plated taps of approved kind, rates also include p.v.c. Drainpipe outlet to the nearest manhole. And the accessories and equipment needed to finish the work in accordance with the details and the instructions of the supervision engineer. Price shall also include all necessary excavation, backfilling, reinforced concrete, reinstatement etc.	L.S	1		
10.2.2	<b>Awning Works</b> Supply and install steel awning at one location or several location as per the detail in the drawing and as per supervision engineer. The price shall also include all steel tubes (columns, horizontal, vertical etc.), steel corrugated sheets, drain gutters, steel bolts, excavation, backfilling, reinforced concrete foundations, reinstatement, 3 Inch galvanized Steel rain water, painting, the fixation, joints, angles and whatever necessary to complete the work in accordance with the drawings, specifications and to the approval of the supervision engineer. Price to include any required works including but not limited to, sealant works, fixing, fastening, welding etc. The Hight of the awning as per drawings or 3.5 meter if not mentioned. The final location or several locations of awning will be fixed during the shop drawing phase and as instructed by the supervision engineer, the Contractor shall not claim for additional cost or object.	m2	25		

10.2.3	<p><b>Handicap Ramp Works:</b>  Supply and Build handicap ramp made from Reinforced Concrete. The price shall include excavation, backfilling, reinstatement, demolish of all obstacles, steel reinforcement, reinforced concrete for ground beam and slab, hollow block wall, 5 cm natural stone tiles, compacted base Corse etc., in accordance with the drawings, details, specifications and to the instructions of the supervision engineer. Handrails of 50mm steel pipes and to include Fixing completely, oil paint three coats in addition to primer coat the hand rails are to be on both sides of the ramp. Price to also include chakered plate, and PVC rubber to the height 2m to the columns. The Contractor to submit shop drawings and details to be approved by the Engineers. Price includes cleaning, plastering and painting the wall adjacent to the newly installed ramp.</p>	L.S	1		
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<b>10.3</b>	<b>Rehabilitation of existing WASH units (Ground Floor)</b>				
<b>A. Civil Works</b>					
<b>10.3.1</b>	Supply and Build Concrete Block Walls, 'Grade 35' of any size blocks single or cavity. The measurements will be to one side only all done according to the dwg. specifications and Engineer instructions and approval. Hollow blocks 10 cm thick for the partition walls. Price shall also include Supply and Cast Reinforced Concrete Grade 'B250 With a minimum cement content of 300 Kg. per cubic meter. Price also to include shuttering, reinforcing 4Ø10 and stirrups 1Ø8@25cm, and all related works according to drawings and specifications and engineer instructions. For the beams 20cmX 10cm above Hollow blocks	M <sup>2</sup>	0.0		
<b>10.3.2</b>	Supply and paint three coats polycide paint for ceilings including corridor ceilings of high quality (Approved by Palestine Standards Institution) and by the supervision engineer.	M <sup>2</sup>	40		
<b>10.3.3</b>	Supply and paint high quality emulsion paint, for top walls and internal drop beams (sides and bottom), on one priming coat and two finishing coats, using two coats of complete putty, as per satisfaction of the supervisor engineer.	M <sup>2</sup>	27		
<b>10.3.4</b>	Supply and Fix Factory-made Steel Doors as per drawings, specification. Price to include frame (door) (as per details), fixing completely, ironmongery, cylinders, cylindrical locks handles (Approved by Palestine Standards Institution). 6 mm. glazing, gaskets, oil Paint in three coats in addition to two primer coats. A 40cm x 40cm sign made of Metal shall be fixed on the door. The sign should be coloured and the icon and writing to be assigned by the supervision engineer, Dimensions: 1m *2.0m	No.	3		
<b>10.3.5</b>	Supply and Install Non-Slip Coloured Ceramic Floor Tiles 0.6 cm Thickness. First choice and free from all defect grade "A". (Approved by Palestine Standards Institution). Price to include sand with cement filling (Grade B-100), pointing with white cement and cleaning on site, removal of the old tiles, levelling and all the necessary work to complete the job in accordance with the instructions of the supervision engineer.	M <sup>2</sup>	40		
<b>10.3.6</b>	Supply and Install White Glazed or coloured Ceramic Wall Tiles 0.6 cm Thickness, First choice European type and free from all defects Grade "A". (Approved by Palestine Standards Institution). Price to include white round aluminium edges patching around services. Two coats of epoxy pointing ..All works shall be in accordance with drawings and specifications.	M <sup>2</sup>	135		
<b>10.3.7</b>	Supply, fix and operate non sliding Aluminium Windows extrusion Section 7700 or equal, with protective electrostatic applied polyester powder paint of 70-80 microns. Price to include 6.38mm thick laminated glass (3+0.38+3mm) for double glass. float glazing and all other accessories and fittings to complete works as per drawings and specifications. Price shall include the steel protection from outside made of steel frame and steel wire mesh. Price shall also include painting, fixing etc.	M <sup>2</sup>	4.0		
<b>10.3.8</b>	Supply and install Local marble threshold for under Doors and under windows 3-4 cm thickness. All as per drawings, specifications and supervision engineer.	m2	5		

10.3.9	Supply and Fix Wooden Doors 4.5 cm Thick single or double sashes. With (Frame),(4.5*3.5) cm hardwood (Zan) edging and (3.5*9.5) cm soft wood stile. Edge strip banding of width 4.5 mm. Formica over veneer on both sides, colour for frames and Architrave as directed by engineer. Door paneling to be soft wood 4.5*3.5 cm. each 4 cm., frames of galvanized steel sheet frame of 2mm thick for corridor doors ( as per drawings), width according to the wall thickness' and Allowance of 4 - 6 cm. thickness for plastering and tiling purposes, immersed in wood preservative before erection then embedded completely in sand - cement mortar and completely anchored as per specification. Architrave of Hardwood (Swedish)(4*1.2)cm, price to include ironmongery, kick plates of aluminium 20cm height from one side for main bath room doors, U shaped 10cm height from both sides at the bottom for internal doors kick plates of aluminium 20cm height for bath room doors, U shaped both sides, and at the bottom door stoppers, transparent fiber glass 6mm thick for both upper vision panel & for vision panel inside door leaf, gaskets cylindrical Lock ((Approved by Palestine Standards Institution), and painting in three coats of oil paint in addition to primer coat. Price includes also aluminium louvers of 50x60cm in the bottom for store doors. All as per Detailed Drawings, specification. Size as per drawings	No.	6		
10.3.10	Supply and Fix Wooden Doors 4.5 cm Thick single or double sashes. With Hardwood (Zan) Frame size (4.5*3.5) cm, and (3.5*9.5) cm soft wood stile. Edge strip banding of width 4.5 mm. Plywood veneer 5mm Thick on both sides. Door paneling to be soft wood 4.5*3.5 cm. each 4 cm. Frame of galvanized steel sheet frame of 2mm thick, width according to the wall thickness' and Allowance of 4 - 6 cm. thickness for plastering and tiling purposes, immersed in wood preservative before erection then embedded completely in sand - cement mortar and completely anchored as per specification. Price to include all the works including ironmongery, cylinders, locks, handles and paint.	No.	1		
<b>B. Electrical Works</b>					
	<p>Preamble: All Supplied Materials Should be Local Made (if available), Grade A and Free From Defects, Having Supervisor Certificate From Palestinian Standard Institution (PSI).</p> <p>Price to include submittal and obtaining approval of shop drawings, detailed and as-built drawings for all works as well as coordinating the same with the other services, activities and furniture.</p> <p>Price to include, also, submittal of catalogues and manufacturer instruction. Fixtures and appliances shall be measured in number. Supply and feeder Cables, cable conduits and cable trays shall not be measured but included in DB's prices</p> <p>Manholes, handholds and the like shall be measured in number. All Systems and devices shall be in lump sum including installation, testing and commissioning.</p> <p>Rates of fixtures and appliances shall include installation, wiring, switches and conduit works.</p> <p>All systems equipment (Class A and approved by Palestine Standards Institution)</p>				
10.3.11	<p><b>Lighting fixtures</b></p> <p>Supply, Install and Connect the following high frequency control gear Lighting Fixtures including P.F. correction capacitors, Lamps, installation for all lighting fixtures using galvanized iron chains to suspend the fixtures in the ceiling and all accessories as per drawings and specifications. Supply and install Surface mounted Type A or Type B as per drawings</p>	SET No.	5		
10.3.12	<p><b>Lighting fixtures</b></p> <p>Supply, Install and Connect the following high frequency control gear Lighting Fixtures including P.F. correction capacitors, Lamps, installation for all lighting fixtures using galvanized iron chains to suspend the fixtures in the ceiling and all accessories as per drawings and specifications. Supply and install 30X120 cm 34W/3700lm LED recessed modular panel with aluminium frame and opal diffuser, colour temp. 4000K UGR&lt;19, IP40</p>	SET No.	5		
<b>C. Mechanical Works</b>					

	<p>Preamble. Supply networks pipes To Tanks, or from on roof feeding tanks to collectors shall be priced in Linear meter. Water tanks shall be measured in number. , Sanitary Fixtures shall be measured in number, price to include cold and hot water pipes supply and fittings to collectors, also to include drain supply , fittings connection, to manholes. Drains, Floor Traps, Clean outs and the like shall be measured in number.</p> <p>Internal sanitary sewers network shall be included in the rates of sanitary fixtures and appliances. and the sanitary fixtures includes the cost of poexgol pipes for basins, toilets, science lab basins, home economics basins, ..etc., price also includes the connection to drainage network of these fixtures in sanitary units and labs. Vents and vertical stacks shall measured in linear meter. Manhole, Galleys and the like shall be measured in number. External sewers pipes shall be measured in linear meter for each individual diameter and material. Rates of all fittings , fixtures , appliances and pipe laying shall include:- Supply of material, workmanship, installation, testing and commissioning. Rates to include also all peace's and fittings, including by passes , floats, cleaning outlets , automatic vents, vents and stack covers, valves and non return valves and the like needed to complete works as per specifications. Insulation and painting as called for in specifications. Excavation and cutting for all pipe laying works, bedding back filling and all works connected with pipe laying. All ties, sleeves, joints, tie bolts and rods, brackets and the like. Rates to include Workshops, Coordinated and as- built drawings as approved by the Engineer. , the contractor should submit best quality, approved two brands for each mechanical works items for approval, and should be approved by PSI, any cut in blocks for installations should be done using special cutting machine, (all mechanical materials as sanitary fixtures fixtures, devices should be Italy made, Germany, Spanish made or equivalent )</p>				
10.3.13	<p>Remove the old Arabic style toilets and supply &amp; Install Porcelain W.C. bowl class "A" white or coloured , (Italy, Spanish made or equivalent) with heavy duty seat and cover. Price includes plastic flush tank, hanging iron steel bracket, bolts and nuts, as well as flexible flush hose , valve, porcelain paper holder, connection to pexogol pipe, connection to drainage and all related materials. Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include complete removal of the old toilets, replacement of any broken tiles, broken valves and then supplying new Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings as per specifications , drawing and as directed by supervision engineer.</p>	Complete Set	3		
10.3.14	<p>Remove the old Arabic style toilets and supply &amp; Install Porcelain W.C. bowl class "A" for KG white or coloured , (Italy, Spanish made or equivalent) with heavy duty seat and cover. Price includes plastic flush tank, hanging iron steel bracket, bolts and nuts, as well as flexible flush hose , valve, porcelain paper holder, connection to pexogol pipe, connection to drainage and all related materials. Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include complete removal of the old toilets, replacement of any broken tiles, broken valves and then supplying new Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings as per specifications , drawing and as directed by supervision engineer.</p>	Complete Set	1		
10.3.15	<p>Supply &amp; Install Porcelain wall hung wash basin white or coloured engineer of size 50 x 45 cm of approved brand (Italy, Spanish made or equivalent), Price shall include chromium plated mixer with chromium plated handle mounted on wall. the price also includes connection to Pexogol pipe, liquide soap holder , and all fixation and hanging bracket. Price includes supplying and installing 40x60cm mirror., semi pedestal and all other required materials, including connection to drainage system.</p>	Complete Set	4		

<b>10.3.16</b>	Supply & Install Porcelain wall hung wash basin for KG white or coloured engineer of size 50 x 45 cm of approved brand (Italy, Spanish made or equivalent), Price shall include chromium plated mixer with chromium plated handle mounted on wall. the price also includes connection to Pexogol pipe, liquide soap holder , and all fixation and hanging bracket. Price includes supplying and installing 40x60cm mirror., semi pedestal and all other required materials, including connection to drainage system.	Complete Set	1		
<b>10.3.17</b>	Remove the old Arabic Style toilets and supply & Install a new one with all its accessories. Price includes plastic flush tank, hanging iron steel bracket, bolts and nuts, as well as flexible flush hose , valve, porcelain paper holder, connection to pexogol pipe, connection to drainage and all related materials. Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include complete removal of the old toilets, replacement of any broken tiles, broken valves and then supplying new Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings as per specifications , drawing and as directed by supervision engineer.	Complete Set	3		
<b>10.3.18</b>	Supply and Install White Vitreous Western type handicapped Toilet (Class A and approved by Palestine Standards Institution) Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings, accessories movable handle and fixed handle as shown on drawings and in Specifications. as per specifications , drawing and as directed by supervision Engineer.	Complete Set	1		
<b>10.3.19</b>	Supply and Install White Vitreous China handicapped Wash Basin(sliding type) (Class A and approved by Palestine Standards Institution), size (40 * 56) cm. Complete with all fittings, valves, waste pipes to nearest floor trap, taps or mixer (Class A and approved by Palestine Standards Institution), connection to water distribution, traps, and any other necessary parts as Specification and as directed by Eng. Price includes supplying and installing 40x60cm mirror. Gear tap.	Complete Set	1		
<b>10.3.21</b>	Supply and install 6" UPVC pipes SN8 heavy duty, at least (4.9mm) thick, Local Made or equal and must be approved by Palestine Standard Institution, between manholes in with all required materials, sockets, fittings , rubber seals, elbow, etc. The price includes excavation ,backfilling of at least 15 cm sand above , below and around the pipes including back-filling of selected material above the sand, and disposal of surplus excavated materials. Excavation shall be to any depth, width, and in any type of soil or rock, connection for internal sewerage network to connect to existing or proposed new sewerage network or the septic tank and insulation of septic tank wall after connection.	L.M	0		
<b>10.3.22</b>	Supply, install and test Copper Collectors 3/4" dia., of approved brand. Price shall be per opening (eye), and shall include for the required copper adaptors, hangers, supports, ties, air vents. Collectors shall be installed on walls, as shown on drawings. The work shall be completed as specified and according to the Engineer's instructions.	Eye	22		
<b>10.3.23</b>	Supply and install wall/window type exhaust fans of approved manufacture (European type or equal) complete with self – act automatic shutter. Price includes galvanized ducts, grills, shutter and making necessary holes in walls or glass and fixing, and wiring cables all as per specifications, and approval of supervisor engineer. The fan shall have it is own electrical wiring inside walls or ceiling, one socket/key etc. The price shall include any excavation, painting, plastering etc. all as shown in drawings, specifications, and approval of supervisor engineer. Extract Fan, 100 CFM	No.	5		

10.3.24	Supply and install wall/window type exhaust fans of approved manufacture (European type or equal) complete with self – act automatic shutter. Price includes galvanized ducts, grills, shutter and making necessary holes in walls or glass and fixing, and wiring cables all as per specifications, and approval of supervisor engineer. The fan shall have it is own electrical wiring inside walls or ceiling, one socket/key etc. The price shall include any excavation, painting, plastering etc. all as shown in drawings, specifications, and approval of supervisor engineer. Extract Fan, 400 CFM IN LINE	No.	2		
10.3.25	Supply and install floor cleanout 4" UPVC including stainless steel (sraled type) cover (15*15cm) complete with connection to drain pipes as located in drawings, specifications and approval of supervisor engineer	No.	1		
10.3.26	Supply and install floor trap/drain 4" UPVC including stainless steel (sraled type) cover (15*15cm) complete with connection to drain pipes as located in drawings, specifications and approval of supervisor engineer	No.	9		
10.4	Rehabilitation of existing WASH units (Third Floor- WASH Facility)				
A. Civil Works					
10.4.1	Supply and Build Concrete Block Walls, 'Grade 35' of any size blocks single or cavity. The measurements will be to one side only all done according to the dwg. specifications and Engineer instructions and approval. Hollow blocks 10 cm thick for the partition walls. Price shall also include Supply and Cast Reinforced Concrete Grade 'B250 With a minimum cement content of 300 Kg. per cubic meter. Price also to include shuttering, reinforcing 4Ø10 and stirrups 1Ø8@25cm, and all related works according to drawings and specifications and engineer instructions. For the beams 20cmX 10cm above Hollow blocks	M <sup>2</sup>	0.0		
10.4.2	Supply and paint three coats polycide paint for ceilings including corridor ceilings of high quality (Approved by Palestine Standards Institution) and by the supervision engineer.	M <sup>2</sup>	30		
10.4.3	Supply and paint high quality emulsion paint, for top walls and internal drop beams (sides and bottom), on one priming coat and two finishing coats, using two coats of complete putty, as per satisfaction of the supervisor engineer.	M <sup>2</sup>	19		
10.4.4	Supply and Fix Factory-made Steel Doors as per drawings, specification. Price to include frame (door) (as per details), fixing completely, ironmongery, cylinders, cylindrical locks handles (Approved by Palestine Standards Institution). 6 mm. glazing, gaskets, oil Paint in three coats in addition to two primer coats. A 40cm x 40cm sign made of Metal shall be fixed on the door. The sign should be coloured and the icon and writing to be assigned by the supervision engineer.	No.	1		
10.4.5	Supply and Install Non-Slip Coloured Ceramic Floor Tiles 0.6 cm Thickness. First choice and free from all defect grade "A". (Approved by Palestine Standards Institution). Price to include sand with cement filling (Grade B-100), pointing with white cement and cleaning on site, removal of the old tiles, levelling and all the necessary work to complete the job in accordance with the instructions of the supervision engineer.	M <sup>2</sup>	30		
10.4.6	Supply and Install White Glazed or coloured Ceramic Wall Tiles 0.6 cm Thickness, First choice European type and free from all defects Grade "A". (Approved by Palestine Standards Institution). Price to include white round aluminium edges patching around services. Two coats of epoxy pointing ..All works shall be in accordance with drawings and specifications.	M <sup>2</sup>	95		

10.4.7	Supply, fix and operate non sliding Aluminium Windows extrusion Section 7700 or equal, with protective electrostatic applied polyester powder paint of 70-80 microns. Price to include 6.38mm thick laminated glass (3+0.38+3mm) for double glass. float glazing and all other accessories and fittings to complete works as per drawings and specifications. Price shall include the steel protection from outside made of steel frame and steel wire mesh. Price shall also include painting, fixing etc.	M <sup>2</sup>	4.0		
10.4.8	Supply and install Local marble threshold for under Doors and under windows 3-4 cm thickness. All as per drawings, specifications and supervision engineer.	m2	4		
10.4.9	Supply and Fix Wooden Doors 4.5 cm Thick single or double sashes. With (Frame),(4.5*3.5) cm hardwood (Zan) edging and (3.5*9.5) cm soft wood stile. Edge strip banding of width 4.5 mm. Formica over veneer on both sides, colour for frames and Architrave as directed by engineer. Door paneling to be soft wood 4.5*3.5 cm. each 4 cm., frames of galvanized steel sheet frame of 2mm thick for corridor doors ( as per drawings), width according to the wall thickness' and Allowance of 4 - 6 cm. thickness for plastering and tiling purposes, immersed in wood preservative before erection then embedded completely in sand - cement mortar and completely anchored as per specification. Architrave of Hardwood (Swedish)(4*1.2)cm, price to include ironmongery, kick plates of aluminium 20cm height from one side for main bath room doors, U shaped 10cm height from both sides at the bottom for internal doors kick plates of aluminium 20cm height for bath room doors, U shaped both sides, and at the bottom door stoppers, transparent fiber glass 6mm thick for both upper vision panel & for vision panel inside door leaf, gaskets cylindrical Lock ((Approved by Palestine Standards Institution), and painting in three coats of oil paint in addition to primer coat. Price includes also aluminium louvers of 50x60cm in the bottom for store doors. All as per Detailed Drawings, specification. Size as per drawings	No.	6		
<b>B. Electrical Works</b>					
	<p>Preamble: All Supplied Materials Should be Local Made (if available), Grade A and Free From Defects, Having Supervisor Certificate From Palestinian Standard Institution (PSI).</p> <p>Price to include submittal and obtaining approval of shop drawings, detailed and as-built drawings for all works as well as coordinating the same with the other services, activities and furniture.</p> <p>Price to include, also, submittal of catalogues and manufacturer instruction.</p> <p>Fixtures and appliances shall be measured in number. Supply and feeder Cables, cable conduits and cable trays shall not be measured but included in DB's prices</p> <p>Manholes, handholds and the like shall be measured in number. All Systems and devices shall be in lump sum including installation, testing and commissioning.</p> <p>Rates of fixtures and appliances shall include installation, wiring, switches and conduit works.</p> <p>All systems equipment (Class A and approved by Palestine Standards Institution)</p>				
10.4.10	<p><b>Lighting points</b></p> <p>Supply, Install and Connect Lighting Points including fire proof boxes fire proof Conduits, fire retardant (E90) 3*1.5 mm2 cables and 5*1.5mm2 for emergency kits, Light Switches, and all accessories as per drawings and specifications. Price to also include any necessary painting or tiling after connecting the points.</p>	SET No.	3		

10.4.11	<p><b>Lighting fixtures</b> Supply, Install and Connect the following high frequency control gear Lighting Fixtures including P.F. correction capacitors, Lamps, installation for all lighting fixtures using galvanized iron chains to suspend the fixtures in the ceiling and all accessories as per drawings and specifications. Supply and install Surface mounted Type A or Type B as per drawings</p>	SET No.	3		
<b>C. Mechanical Works</b>					
	<p>Preamble. Supply networks pipes To Tanks, or from on roof feeding tanks to collectors shall be priced in Linear meter. Water tanks shall be measured in number. , Sanitary Fixtures shall be measured in number, price to include cold and hot water pipes supply and fittings to collectors, also to include drain supply , fittings connection, to manholes. Drains, Floor Traps, Clean outs and the like shall be measured in number. Internal sanitary sewers network shall be included in the rates of sanitary fixtures and appliances. and the sanitary fixtures includes the cost of poexgol pipes for basins, toilets, science lab basins, home economics basins, ..etc., price also includes the connection to drainage network of these fixtures in sanitary units and labs. Vents and vertical stacks shall measured in linear meter. Manhole, Galleys and the like shall be measured in number. External sewers pipes shall be measured in linear meter for each individual diameter and material. Rates of all fittings , fixtures , appliances and pipe laying shall include:- Supply of material, workmanship, installation, testing and commissioning. Rates to include also all peace's and fittings, including by passes , floats, cleaning outlets , automatic vents, vents and stack covers, valves and non return valves and the like needed to complete works as per specifications. Insulation and painting as called for in specifications. Excavation and cutting for all pipe laying works, bedding back filling and all works connected with pipe laying. All ties, sleeves, joints, tie bolts and rods, brackets and the like. Rates to include Workshops, Coordinated and as- built drawings as approved by the Engineer. , the contractor should submit best quality, approved two brands for each mechanical works items for approval, and should be approved by PSI, any cut in blocks for installations should be done using special cutting machine, (all mechanical materials as sanitary fixtures fixtures, devices should be Italy made, Germany, Spanish made or equivalent )</p>				
10.4.12	<p>Remove the old Arabic style toilets and supply &amp; Install Porcelain W.C. bowl class "A" white or coloured , (Italy, Spanish made or equivalent) with heavy duty seat and cover. Price includes plastic flush tank, hanging iron steel bracket, bolts and nuts, as well as flexible flush hose , valve, porcelain paper holder, connection to pexogol pipe, connection to drainage and all related materials. Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include complete removal of the old toilets, replacement of any broken tiles, broken valves and then supplying new Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings as per specifications , drawing and as directed by supervision engineer.</p>	Complete Set	3		
10.4.13	<p>Remove the old Arabic Style toilets and supply &amp; Install a new one with all its accessories. Price includes plastic flush tank, hanging iron steel bracket, bolts and nuts, as well as flexible flush hose , valve, porcelain paper holder, connection to pexogol pipe, connection to drainage and all related materials. Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include complete removal of the old toilets, replacement of any broken tiles, broken valves and then supplying new Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings as per specifications , drawing and as directed by supervision engineer.</p>	Complete Set	3		

<b>10.4.14</b>	Supply & Install Porcelain wall hung wash basin white or coloured engineer of size 50 x 45 cm of approved brand (Italy, Spanish made or equivalent), Price shall include chromium plated mixer with chromium plated handle mounted on wall. the price also includes connection to Pexogol pipe, liquide soap holder , and all fixation and hanging bracket. Price includes supplying and installing 40x60cm mirror., semi pedestal and all other required materials, including connection to drainage system.	Complete Set	4		
<b>10.4.15</b>	Supply and install 3/4" diameter pipe schedule 40 galvanized steel pipes with all necessary fittings such as elbows Tees, unions, air vents, supports, hangers, shields, saddles, plastic tape etc. All piping hung on shafts, or in riser, and in sanitary block are measured in meter run. All pipes imbedded in walls or in site external shall be coated with layers of extruded polyethylene. All pipe joints imbedded in walls shall be coated with thick asphalt layer, all hot water pipes shall be insulated with polyethylene and to be cladded on roof. Price to also include any necessary painting or tiling after connecting the points. The works shall include bring the water from the nearest source.	L.M	15		
<b>10.4.18</b>	Supply and install wall/window type exhaust fans of approved manufacture (European type or equal) complete with self – act automatic shutter. Price includes galvanized ducts, grills, shutter and making necessary holes in walls or glass and fixing, and wiring cables all as per specifications, and approval of supervisor engineer. The fan shall have it is own electrical wiring inside walls or ceiling, one socket/key etc. The price shall include any excavation, painting, plastering etc. all as shown in drawings, specifications, and approval of supervisor engineer. Extract Fan, 100 CFM	No.	4		
<b>10.4.19</b>	Supply and install floor cleanout 4" UPVC including stainless steel (sraled type) cover (15*15cm) complete with connection to drain pipes as located in drawings, specifications and approval of supervisor engineer	No.	1		
<b>10.4.20</b>	Supply and install floor trap/drain 4" UPVC including stainless steel (sraled type) cover (15*15cm) complete with connection to drain pipes as located in drawings, specifications and approval of supervisor engineer	No.	6		
<b>10.4.21</b>	Supply, install and test Copper Collectors 3/4" dia., of approved brand. Price shall include all openings (eyes), and shall include for the required copper adaptors, hangers, supports, ties, air vents. Collectors shall be installed on walls, as shown on drawings. The work shall be completed as specified and according to the Engineer's instructions.	eye	16		
<b>Total Qarawa Preparatory Boys School (NIS)</b>					



BILLS OF QUANTITIES					
CONSULTANT: Universal Group for Engineering and Consulting			DATE: March 2023		
Qarawa Boys High School					
ITEM No.	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (ILS)	AMOUNT (ILS)
11.1	Preliminary Items				
11.1.1	Supply and installation of the project marble sign (110 cm x 70cm) that include colored project information. The Contractor shall do the design and fix the sign as per the supervision engineer instructions. The price shall include fixing the sign properly with all required drilling, jumbo bolts, rehabilitation of any damages occurred during fixation.	No.	1		
11.1.2	Remove carefully works inside the WASH facilities (WCs). The price shall include but not limited to remove carefully, main doors, WC doors, sinks, wash basins, lighting Points, Collectors, accessories, taps, floors and wall tiles etc. all as per drawings, and Engineer instructions. The Contractor shall transport all removed materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
11.2	External Works				
11.2.1	<b>Drinking Fountain Works:</b> Supply and install outside drinking fountain as shown on drawings, rate includes, sink 4.35X0.75m on block stands, the work should be finished and completed to the highest standard. Rate include excavation, B200 R. concrete (all steel reinforcement required), stone works, plastering, glazing tiles, local marble coping, planters and metal cover with all fittings, 8 unit high quality (Class A and approved by Palestine Standards Institution) chrome plated taps of approved kind, rates also include p.v.c. Drainpipe outlet to green area or as per drawings.	L.S	1		
11.2.2	<b>Awning Works</b> Supply and install steel awning at one location or several location as per the detail in the drawing and as per supervision engineer. The price shall also include all steel tubes (columns, horizontal, vertical etc.), steel corrugated sheets, drain gutters, steel bolts, excavation, backfilling, reinforced concrete foundations, reinstatement, 3 Inch galvanized Steel rain water, painting, the fixation, joints, angles and whatever necessary to complete the work in accordance with the drawings, specifications and to the approval of the supervision engineer. Price to include any required works including but not limited to, sealant works, fixing, fastening, welding etc. The Hight of the awning as per drawings or 3.5 meter if not mentioned. The final location or several locations of awning will be fixed during the shop drawing phase and as instructed by the supervision engineer, the Contractor shall not claim for additional cost or object.	m2	25		

11.3	Rehabilitation of existing WASH units				
<b>A. Civil Works</b>					
11.3.1	Supply and Build Concrete Block Walls, 'Grade 35' of any size blocks single or cavity. The measurements will be to one side only all done according to the dwg. specifications and Engineer instructions and approval. Hollow blocks 10 cm thick for the partition walls. Price shall also include Supply and Cast Reinforced Concrete Grade 'B250 With a minimum cement content of 300 Kg. per cubic meter. Price also to include shuttering, reinforcing 4Ø10 and stirrups 1Ø8@25cm, and all related works according to drawings and specifications and engineer instructions. For the beams 20cmX 10cm above Hollow blocks	M <sup>2</sup>	0.0		
11.3.2	Supply and paint three coats polycide paint for ceilings including corridor ceilings of high quality (Approved by Palestine Standards Institution) and by the supervision engineer.	M <sup>2</sup>	28		
11.3.3	Supply and paint high quality emulsion paint, for top walls and internal drop beams (sides and bottom), on one priming coat and two finishing coats, using two coats of complete putty, as per satisfaction of the supervisor engineer.	M <sup>2</sup>	18		
11.3.4	Supply and Fix Factory-made steel Doors as per drawings, specification. Price to include frame (door) (as per details), fixing completely, ironmongery, cylinders, cylindrical locks handles (Approved by Palestine Standards Institution). 6 mm. glazing, gaskets, oil Paint in three coats in addition to two primer coats. A 40cm x 40cm sign made of Metal shall be fixed on the door. The sign should be colored and the icon and writing to be assigned by the supervision engineer, Dimensions: 1m *2.0m	No.	1		
11.3.5	Supply and Install Non-Slip Colored Ceramic Floor Tiles 0.6 cm Thickness. First choice and free from all defect grade "A". (Approved by Palestine Standards Institution). Price to include sand with cement filling (Grade B-100), pointing with white cement and cleaning on site, removal of the old tiles, leveling and all the necessary work to complete the job in accordance with the instructions of the supervision engineer.	M <sup>2</sup>	28		
11.3.6	Supply and Install White Glazed or colored Ceramic Wall Tiles 0.6 cm Thickness, First choice European type and free from all defects Grade "A". (Approved by Palestine Standards Institution). Price to include white round aluminum edges patching around services. Two coats of epoxy pointing .All works shall be in accordance with drawings and specifications.	M <sup>2</sup>	88		
11.3.7	Supply, fix and operate non sliding Aluminum Windows extrusion Section 7700 or equal, with protective electrostatic applied polyester powder paint of 70-80 microns. In color of bronze. Price to include 6.38mm thick laminated glass (3+0.38+3mm) for double glass. float glazing and all other accessories and fittings to complete works as per drawings and specifications. Price shall include the steel protection from outside made of steel frame and steel wire mesh. Price shall also include painting, fixing etc.	M <sup>2</sup>	5.0		
11.3.8	Supply and install Local marble threshold for under Doors and under windows 3-4 cm thickness. All as per drawings, specifications and supervsion engineer.	m2	3		
11.3.9	Supply and Fix Wooden Doors 4.5 cm Thick single or double sashes. With (Frame),(4.5*3.5) cm hardwood (Zan) edging and (3.5*9.5) cm soft wood stile. Edge strip banding of width 4.5 mm. Formica over veneer on both sides, color for frames and Architrave as directed by engineer. Door paneling to be soft wood 4.5*3.5 cm. each 4 cm., frames galvanized steel sheet frame of 2mm thick for corridor doors ( as per drawings), width according to the wall thickness' and Allowance of 4 - 6 cm. thickness for plastering and tiling purposes, immersed in wood preservative before erection then embedded completely in sand - cement mortar and completely anchored as per specification. Architrave of Hardwood (Swedish)(4*1.2)cm, price to include ironmongery, kick plates of aluminum 20cm height from one side for main bath room doors, U shaped 10cm height from both sides at the bottom for internal doors kick plates of aluminum 20cm height for bath room doors, U shaped both sides, and at the bottom door stoppers, transparent fiber glass 6mm thick for both upper vision panel & for vision panel inside door leaf, gaskets cylindrical Lock ((Approved by Palestine Standards Institution), and painting in three coats of oil paint in addition to primer coat. Price includes also aluminum louvers of 50x60cm in the bottom for store doors. All as per Detailed Drawings, specification. Size as per drawings	No.	6		
<b>B. Electrical Works</b>					

	<p>Preamble: All Supplied Materials Should be Local Made (if available), Grade A and Free From Defects, Having Supervisor Certificate From Palestinian Standard Institution (PSI).</p> <p>Price to include submittal and obtaining approval of shop drawings, detailed and as-built drawings for all works as well as coordinating the same with the other services, activities and furniture.</p> <p>Price to include, also, submittal of catalogues and manufacturer instruction.</p> <p>Fixtures and appliances shall be measured in number. Supply and feeder Cables, cable conduits and cable trays shall not be measured but included in DB's prices</p> <p>Manholes, handholds and the like shall be measured in number. All Systems and devices shall be in lump sum including installation, testing and commissioning.</p> <p>Rates of fixtures and appliances shall include installation, wiring, switches and conduit works.</p> <p>All systems equipment (Class A and approved by Palestine Standards Institution)</p>				
11.3.10	<p><b>Lighting points</b></p> <p>Supply, Install and Connect Lighting Points including fire proof boxes fire proof Conduits, fire retardant (E90) 3*1.5 mm2 cables and 5*1.5mm2 for emergency kits, Light Switches, and all accessories as per drawings and specifications. Price to also include any necessary painting or tiling after connecting the points.</p>	SET No.	6		
11.3.11	<p><b>Lighting fixtures</b></p> <p>Supply, Install and Connect the following high frequency control gear Lighting Fixtures including P.F. correction capacitors, Lamps, installation for all lighting fixtures using galvanized iron chains to suspend the fixtures in the ceiling and all accessories as per drawings and specifications.</p> <p>Supply and install Surface mounted Type A or Type B as per drawings</p>	SET No.	6		
<b>C. Mechanical Works</b>					

	<p>Preamble. Supply networks pipes To Tanks, or from on roof feeding tanks to collectors shall be priced in Linear meter. Water tanks shall be measured in number. , Sanitary Fixtures shall be measured in number, price to include cold and hot water pipes supply and fittings to collectors, also to include drain supply , fittings connection, to manholes. Drains, Floor Traps, Clean outs and the like shall be measured in number.</p> <p>Internal sanitary sewers network shall be included in the rates of sanitary fixtures and appliances. and the sanitary fixtures includes the cost of poexgol pipes for basins, toilets, science lab basins, home economics basins, ..etc., price also includes the connection to drainage network of these fixtures in sanitary units and labs. Vents and vertical stacks shall measured in linear meter. Manhole, Galleys and the like shall be measured in number. External sewers pipes shall be measured in linear meter for each individual diameter and material. Rates of all fittings , fixtures , appliances and pipe laying shall include:- Supply of material, workmanship, installation, testing and commissioning. Rates to include also all peace's and fittings, including by passes , floats, cleaning outlets , automatic vents, vents and stack covers, valves and non return valves and the like needed to complete works as per specifications. Insulation and painting as called for in specifications. Excavation and cutting for all pipe laying works, bedding back filling and all works connected with pipe laying. All ties, sleeves, joints, tie bolts and rods, brackets and the like. Rates to include Workshops, Coordinated and as- built drawings as approved by the Engineer. , the contractor should submit best quality, approved two brands for each mechanical works items for approval, and should be approved by PSI, any cut in blocks for installations should be done using special cutting machine, (all mechanical materials as sanitary fixtures fixtures, devices should be Italy made, Germany, Spanish made or equivalent )</p>				
11.3.12	<p>Remove the old Arabic style toilets and supply &amp; Install Porcelain W.C. bowl class "A" white or colored , (Italy, Spanish made or equivalent) with heavy duty seat and cover. Price includes plastic flush tank, hanging iron steel bracket, bolts and nuts, as well as flexible flush hose , valve, porcelain paper holder, connection to pexogol pipe, connection to drainage and all related materials. Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include complete removal of the old toilets, replacement of any broken tiles, broken valves and then supplying new Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings as per specifications , drawing and as directed by supervision engineer.</p>	Complete Set	6		
11.3.13	<p>Supply &amp; Install Porcelain wall hung wash basin white or colored engineer of size 50 x 45 cm of approved brand (Italy, Spanish made or equivalent), Price shall include chromium plated mixer with chromium plated handle mounted on wall. the price also includes connection to Pexogol pipe, liquide soap holder , and all fixation and hanging bracket. Price includes supplying and installing 40x60cm mirror., semi pedestal and all other required materials, including connection to drainage system.</p>	Complete Set	4		
11.3.14	<p>Supply and install wall/window type exhaust fans of approved manufacture (European type or equal) complete with self – act automatic shutter. Price includes galvanized ducts, grills, shutter and making necessary holes in walls or glass and fixing, and wiring cables all as per specifications, and approval of supervisor engineer. The fan shall have it is own electrical wiring inside walls or ceiling, one soket/key etc. The price shall include any excavation, painting, plastering etc. all as shown in drawings, specifications, and approval of supervisor engineer.</p> <p>Extract Fan, 400 CFM IN LINE</p>	No.	1		
11.3.15	<p>Supply and install floor cleanout 4" UPVC including stainless steel (sraled type) cover (15*15cm) complete with connection to drain pipes as located in drawings, specifications and approval of supervisor engineer</p>	No.	1		
11.3.16	<p>Supply, install and test Copper Collectors 3/4" dia., of approved brand. Price shall be per opening (eye), and shall include for the required copper adaptors, hangers, supports, ties, air vents. Collectors shall be installed on walls, as shown on drawings. The work shall be completed as specified and according to the Engineer's instructions.</p>	Eye	19		
11.3.17	<p>Supply and install floor trap/drain 4" UPVC including stainless steel (sraled type) cover (15*15cm) complete with connection to drain pipes as located in drawings, specifications and approval of supervisor engineer</p>	No.	9		

11.4	Construction of New Handicap WASH unit				
<b>A. Civil Works</b>					
11.4.1	Site clearance of any type of stairs, reinforced concrete, trees, branches, rocks, etc. in order to start the work. While keeping the trees intact and safe in order to re-plant the trees in a suitable place in accordance with the supervision engineer and to his approval.	LS	1.0		
11.4.2	Excavation for foundations and/or ground beam in any kind of soil or rock to the dimensions and levels shown in the drawings. (from N.G.L to bottom of hardcore layer) Price to include removal of extra and unsuitable soil to approved location. The price shall include reinstatement of any damage occurred during excavation. All as per drawings and specifications and supervision instructions.	M3	1.60		
11.4.3	Import and fill with selected Imported Approved Fill; to the required levels and where directed by the Engineer. Filling shall be on layers not to exceed 20cm. thick. Price to include leveling, watering and compacting to 98 % field density and all related works according to drawings and specifications and engineer instructions. The contractor to backfill using excavated soil if suitable or imported approved material.	M3	1.6		
11.4.4	Supply and Well Compact 40cm thick Base Coarse as per drawing compacted to min.98% of maximum dry density of modified Proctor, in layers 20cm thick. Price includes leveling, watering, leveling and compacting of ground (sub-base) under base coarse to min. 98% according to Field Density Test. Under foundation	M2	1.5		
11.4.5	Blinding Concrete grade 'B200' With a minimum cement content of 250 Kg. per cubic meter under footings and tie beams and where required, Thickness not less than 10cm thick, should be according to drawings. Price to include all required work according to specifications and drawings and engineer instruction.	M2	1.5		
11.4.6	Supply and Cast Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include shuttering, reinforcing , painting with two coats of hot bitumen (75/25) (for the buried parts) and all related works according to drawings and specifications and engineer instructions. For the foundations	M3	0.6		
11.4.7	Supply and Cast Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include shuttering, reinforcing , painting with two coats of hot bitumen (75/25) (for the buried parts) and all related works according to drawings and specifications and engineer instructions. For the ground beams	M3	1.5		
11.4.8	Supply and Cast Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include shuttering, reinforcing and all related works according to drawings and specifications and engineer instructions. For the columns	M3	1.4		
11.4.9	Supply and Cast 10 cm of Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include shuttering, reinforcing , compacted basecourse layers, painting with two coats of hot bitumen (75/25) (for the buried parts) and all related works according to drawings and specifications and engineer instructions. For the slab on grade	M2	6.5		

11.4.10	Supply and Cast 20 cm Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include shuttering, reinforcing , painting with two coats of hot bitumen (75/25) (for the buried parts) and all related works according to drawings and specifications and engineer instructions. For the solid slab including beams and drop beams	M2	7.0		
11.4.11	Supply and Build Concrete Block Walls, 'Grade 35' of any size blocks single or cavity . the measurements will be to one side only all done according to the dwg. specifications and Engineer instructions and approval. Hollow blocks 20 cm thick for the walls of the toilet. Price shall also include Supply and Cast Reinforced Concrete Grade 'B250 With a minimum cement content of 300 Kg. per cubic meter. Price also to include shuttering, reinforcing 4Ø10 and stirrups 1Ø8@25cm, and all related works according to drawings and specifications and engineer instructions. For the beams 20cmX 20cm above Hollow blocks	M <sup>2</sup>	30.0		
11.4.12	supply and install two Coats of Cement and Sand Plaster over one slurry coat to walls and ceilings and where required for External plastering. price include Waterproofing additive (W 290) with the second and last face and painting with standard approved color Waterproofing supercyl for External walls of the existing structure at the entrance. Price to also include 2 coats of external painting (supercryle). To the toilets.	M <sup>2</sup>	40.0		
11.4.13	Supply and paint three coats polycide paint for ceilings including corridor ceilings of high quality (Approved by Palestine Standards Institution) and by the supervision engineer.	M <sup>2</sup>	6.5		
11.4.14	Supply and paint high quality emulsion paint, for top walls and internal drop beams (sides and bottom), on one priming coat and two finishing coats, using two coats of complete putty, as per satisfaction of the supervisor engineer.	M <sup>2</sup>	8		
11.4.15	Supply & paint three coats of external quality waterproofing supercyle paint for Corridors (walls) and parapet wall according to drawings and specifications.	M <sup>2</sup>	30		
11.4.16	Supply and Fix Factory-made steel Doors as per drawings, specification. Price to include frame (door) (as per details), fixing completely, ironmongery, cylinders, cylindrical locks handles (Approved by Palestine Standards Institution). 6 mm. glazing, gaskets, oil Paint in three coats in addition to two primer coats. A 40cm x 40cm sign made of Metal shall be fixed on the door. The sign should be colored and the icon and writing to be assigned by the supervision engineer, Dimensions: 1m *2.0m	No.	1		

11.4.17	<p>Supply and Install Non-Slip Colored Ceramic Floor Tiles 0.6 cm Thickness. First choice and free from all defect grade "A". (Approved by Palestine Standards Institution). Price to include sand with cement filling (Grade B-100), pointing with white cement and cleaning on site, removal of the old tiles, leveling and all the necessary work to complete the job in accordance with the instructions of the supervision engineer.</p>	M <sup>2</sup>	7		
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11.4.18	Supply and Install White Glazed or colored Ceramic Wall Tiles 0.6 cm Thickness, First choice European type and free from all defects Grade "A". (Approved by Palestine Standards Institution). Price to include white round aluminum edges patching around services. Two coats of epoxy pointing .All works shall be in accordance with drawings and specifications.	M <sup>2</sup>	12.5		
11.4.19	Supply, fix and operate non sliding Aluminum Windows extrusion Section 7700 or equal, with protective electrostatic applied polyester powder paint of 70-80 microns. In color of bronze. Price to include 6.38mm thick laminated glass (3+0.38+3mm) for double glass. float glazing and all other accessories and fittings to complete works as per drawings and specifications. Dimensions of 0.7X 0.6 m Price shall include the steel protection from outside made of steel frame and steel wire mesh. Price shall also include painting, fixing etc.	No.	0.5		
11.4.20	Supply and apply app waterproofing membrane of bitumen rolls. (4 mm. of reinforced polyester sheets) covered with layer of white chipping, over roof slab and around parapets with overlaps of not less than 10 cm. Price to include primer coats of approval source according to specifications and engineer's instructions.	M <sup>2</sup>	6.5		
11.4.21	Supply and install Local marble threshold for under Doors and under windows 3-4 cm thickness	m2	3		
<b>B. Electrical Works</b>					
	<p>Preamble: All Supplied Materials Should be Local Made (if available), Grade A and Free From Defects, Having Supervisor Certificate From Palestinian Standard Institution (PSI).</p> <p>Price to include submittal and obtaining approval of shop drawings, detailed and as-built drawings for all works as well as coordinating the same with the other services, activities and furniture.</p> <p>Price to include, also, submittal of catalogues and manufacturer instruction. Fixtures and appliances shall be measured in number. Supply and feeder Cables, cable conduits and cable trays shall not be measured but included in DB's prices</p> <p>Manholes, handholds and the like shall be measured in number. All Systems and devices shall be in lump sum including installation, testing and commissioning.</p>				



11.4.22	<b>Lighting points</b> Supply, Install and Connect Lighting Points including fire proof boxes fire proof Conduits, fire retardant (E90) 3*1.5 mm2 cables and 5*1.5mm2 for emergency kits, Light Switches, and all accessories as per drawings and specifications. Price to also include any necessary painting or tiling after connecting the points.	SET No.	1		
11.4.23	<b>Lighting fixtures</b> Supply, Install and Connect the following high frequency control gear Lighting Fixtures including P.F. correction capacitors, Lamps, installation for all lighting fixtures using galvanized iron chains to suspend the fixtures in the ceiling and all accessories as per drawings and specifications. Supply and install Surface mounted Type A or Type B as per drawings	SET No.	1		
11.4.24	<b>Main Electrical Connection</b> Supply, Install and Connect 5x6mm2 XLPE cable include 1Φ1.5" PVC conduit from MDB to the new Unit. Price shall also include excavation, any necessary painting, plastering or tiling after connecting the points.	L.M	15		
<b>C. Mechanical Works</b>					
	Preamble. Supply networks pipes To Tanks, or from on roof feeding tanks to collectors shall be priced in Linear meter. Water tanks shall be measured in number. , Sanitary Fixtures shall be measured in number, price to include cold and hot water pipes supply and fittings to collectors, also to include drain supply , fittings connection, to manholes. Drains, Floor Traps, Clean outs and the like shall be measured in number. Internal sanitary sewers network shall be included in the rates of sanitary fixtures and appliances. and the sanitary fixtures includes the cost of poexgol pipes for basins, toilets, science lab basins, home economics basins, ..etc., price also includes the connection to drainage network of these fixtures in sanitary units and labs. Vents and vertical stacks shall measured in linear meter. Manhole, Galleys and the like shall be measured in number. External sewers pipes shall be measured in linear meter for each individual diameter and material. Rates of all fittings , fixtures , appliances and pipe laying shall include:- Supply of material, workmanship, installation, testing and commissioning. Rates to include also all peace's and fittings, including by passes , floats, cleaning outlets , automatic vents, vents and stack covers, valves and non return valves and the like needed to complete works as per specifications. Insulation and painting as called for in specifications. Excavation and cutting for all pipe laying works, bedding back filling and all works connected with pipe laying. All ties, sleeves, joints, tie bolts and rods, brackets and the like. Rates to include Workshops, Coordinated and as- built drawings as approved by the Engineer. , the contractor should submit best quality, approved two brands for each mechanical works items for approval, and should be approved by PSI, any cut in blocks for installations should be done using special cutting machine, (all mechanical materials as sanitary fixtures fixtures, devices should be Italy made, Germany, Spanish made or equivalent )				
11.4.25	Supply and Install White Vitreous Western type handicapped Toilet (Class A and approved by Palestine Standards Institution) Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings, accessories movable handle and fixed handle as shown on drawings and in Specifications. as per specifications , drawing and as directed by supervision Engineer.	Complete Set	1		
11.4.26	Supply and Install White Vitreous China handicapped Wash Basin(sliding type) (Class A and approved by Palestine Standards Institution), size (40 * 56) cm. Complete with all fittings, valves, waste pipes to nearest floor trap, taps or mixer (Class A and approved by Palestine Standards Institution), connection to water distribution, traps, and any other necessary parts as Specification and as directed by Eng. Price includes supplying and installing 40x60cm mirror. Gear tap.	Complete Set	1		
11.4.27	Supply and install 6" UPVC pipes SN8 heavy duty, at least (4.9mm) thick, Local Made or equal and must be approved by Palestine Standard Institution, between manholes in with all required materials, sockets, fittings , rubber seals, elbow, etc. The price includes excavation ,backfilling of at least 15 cm sand above , below and around the pipes including back-filling of selected material above the sand, and disposal of surplus excavated materials. Excavation shall be to any depth, width, and in any type of soil or rock, connection for internal sewerage network to connect to existing or proposed new sewage network or the septic tank and insulation of septic tank wall after connection.	L.M	5		
11.4.28	Supply and install 4" galvanized vertical pipes heavy duty for rain water, Local Made or equal and must be approved by Palestine Standard Institution. Price includes digging for pipes, supports, hangers , and all rubber joints and sealants, and rainwater pipe end outlets from roof to ground.	L.M	4		

<b>11.4.29</b>	Heavy duty stainless steel 4" floor drain syphon trap with screw type screen and with closed covers for urinals , all of approved brand , complete with all required fittings and connections using reduced "T" for connecting sanitary fixtures, the traps in stairs to be with closed cover	No	1		
<b>11.4.30</b>	Supply and Install of Precast Concrete Manholes with minimum 15cm wall thickness for sewage and storm water drainage In compliance with specifications and Drawings. Price shall include excavation to any depth according to slopes, B200 reinforced concrete for base, back filling, cement plaster, benching, 8 or 25Ton Cast Iron cover as indicated , drop if needed, and all necessary works. all as shown in drawings, specifications, and approval of supervisor engineer. a. Ø60cm, 8 ton C.I cover	NO.	1		
<b>11.4.31</b>	Supply and install floor cleanout 4" UPVC including stainless steel (sraled type) cover (15*15cm) complete with connection to drain pipes as located in drawings, specifications and approval of supervisor engineer	No.	1		
<b>Total Qarawa Boys High School (NIS)</b>					

BILLS OF QUANTITIES					
CONSULTANT: Universal Group for Engineering and Consulting			DATE: March 2023		
Al Zawiya Secondary Boys School					
ITEM No.	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (ILS)	AMOUNT (ILS)
12.1	Preliminary Items				
12.1.1	Supply and installation of the project marble sign (110 cm x 70cm) that include colored project information. The Contractor shall do the design and fix the sign as per the supervision engineer instructions. The price shall include fixing the sign properly with all required drilling, jumbo bolts, rehabilitation of any damages occurred during fixation.	No.	1		
12.1.2	Demolishing works inside the WASH facilities (WCs) that intersects with the designed structure in accordance with the drawings and includes the floor and walls tiles.. The price shall include remove all demolished materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
12.1.3	Remove carefully works inside the WASH facilities (WCs). The price shall include but not limited to remove carefully, main doors, WC doors, sinks, wash basins, lighting Points, Collectors, accessories, taps, etc. all as per drawings, and Engineer instructions. The Contractor shall transport all removed materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
12.2	External Works				
12.2.1	<b>Awning Works</b> Supply and install steel awning at one location or several location as per the detail in the drawing and as per supervision engineer. The price shall also include all steel tubes (columns, horizontal, vertical etc.), steel corrugated sheets, drain gutters, steel bolts, excavation, backfilling, reinforced concrete foundations, reinstatement, 3 Inch galvanized Steel rain water, painting, the fixation, joints, angles and whatever necessary to complete the work in accordance with the drawings, specifications and to the approval of the supervision engineer. Price to include any required works including but not limited to, sealant works, fixing, fastening, welding etc. The Hight of the awning as per drawings or 3.5 meter if not mentioned. The final location or several locations of awning will be fixed during the shop drawing phase and as instructed by the supervision engineer, the Contractor shall not claim for additional cost or object.	m2	25		
12.2.2	<b>Handicap Ramp Works:</b> Supply and Build handicap ramp made from Reinforced Concrete. The price shall include excavation, backfilling, reinstatement, demolish of all obstacles, steel reinforcement, reinforced concrete for ground beam and slab, hollow block wall, 5 cm natural stone tiles, compacted base Corse etc., in accordance with the drawings, details, specifications and to the instructions of the supervision engineer. Handrails of 50mm steel pipes and to include Fixing completely, oil paint three coats in addition to primer coat the hand rails are to be on both sides of the ramp. Price to also include chakered plate, and PVC rubber to the height 2m to the columns. The Contractor to submit shop drawings and details to be approved by the Engineers. Price includes cleaning, plastering and painting the wall adjacent to the newly installed ramp.	L.S	1		

<b>12.3</b>	<b>Rehabilitation of existing WASH units</b>				
<b>A. Civil Works</b>					
<b>12.3.1</b>	Supply and Build Concrete Block Walls, 'Grade 35' of any size blocks single or cavity. The measurements will be to one side only all done according to the dwg. specifications and Engineer instructions and approval. Hollow blocks 10 cm thick for the partition walls. Price shall also include Supply and Cast Reinforced Concrete Grade 'B250 With a minimum cement content of 300 Kg. per cubic meter. Price also to include shuttering, reinforcing 4Ø10 and stirrups 1Ø8@25cm, and all related works according to drawings and specifications and engineer instructions. For the beams 20cmX 10cm above Hollow blocks	M <sup>2</sup>	0.0		
<b>12.3.2</b>	Supply and paint three coats polycide paint for ceilings including corridor ceilings of high quality (Approved by Palestine Standards Institution) and by the supervision engineer.	M <sup>2</sup>	30		
<b>12.3.3</b>	Supply and paint high quality emulsion paint, for top walls and internal drop beams (sides and bottom), on one priming coat and two finishing coats, using two coats of complete putty, as per satisfaction of the supervisor engineer.	M <sup>2</sup>	25		
<b>12.3.4</b>	Supply and Fix Factory-made Steel Doors as per drawings, specification. Price to include frame (door) (as per details), fixing completely, ironmongery, cylinders, cylindrical locks handles (Approved by Palestine Standards Institution). 6 mm. glazing, gaskets, oil Paint in three coats in addition to two primer coats. A 40cm x 40cm sign made of Metal shall be fixed on the door. The sign should be colored and the icon and writing to be assigned by the supervision engineer, Dimensions: 1m *2.0m	No.	1		
<b>12.3.5</b>	Supply and Install Non-Slip Colored Ceramic Floor Tiles 0.6 cm Thickness. First choice and free from all defect grade "A". (Approved by Palestine Standards Institution). Price to include sand with cement filling (Grade B-100), pointing with white cement and cleaning on site, removal of the old tiles, leveling and all the necessary work to complete the job in accordance with the instructions of the supervision engineer.	M <sup>2</sup>	30		
<b>12.3.6</b>	Supply and Install White Glazed or colored Ceramic Wall Tiles 0.6 cm Thickness, First choice European type and free from all defects Grade "A". (Approved by Palestine Standards Institution). Price to include white round aluminum edges patching around services. Two coats of epoxy pointing ..All works shall be in accordance with drawings and specifications.	M <sup>2</sup>	102		
<b>12.3.7</b>	Supply, fix and operate non sliding Aluminum Windows extrusion Section 7700 or equal, with protective electrostatic applied polyester powder paint of 70-80 microns. In color of bronze. Price to include 6.38mm thick laminated glass (3+0.38+3mm) for double glass. float glazing and all other accessories and fittings to complete works as per drawings and specifications. Price shall include the steel protection from outside made of steel frame and steel wire mesh. Price shall also include painting, fixing etc.	M <sup>2</sup>	3.0		
<b>12.3.8</b>	Supply and install Local marble threshold for under Doors and under windows 3-4 cm thickness. All as per drawings, specifications and supervision engineer.	m2	4		

12.3.9	Supply and Fix Wooden Doors 4.5 cm Thick single or double sashes. With (Frame),(4.5*3.5) cm hardwood (Zan) edging and (3.5*9.5) cm soft wood stile. Edge strip banding of width 4.5 mm. Formica over veneer on both sides, color for frames and Architrave as directed by engineer. Door paneling to be soft wood 4.5*3.5 cm. each 4 cm., frames of galvanized steel sheet frame of 2mm thick for corridor doors ( as per drawings), width according to the wall thickness' and Allowance of 4 - 6 cm. thickness for plastering and tiling purposes, immersed in wood preservative before erection then embedded completely in sand - cement mortar and completely anchored as per specification. Architrave of Hardwood (Swedish)(4*1.2)cm, price to include ironmongery, kick plates of aluminum 20cm height from one side for main bath room doors, U shaped 10cm height from both sides at the bottom for internal doors kick plates of aluminum 20cm height for bath room doors, U shaped both sides, and at the bottom door stoppers, transparent fiber glass 6mm thick for both upper vision panel & for vision panel inside door leaf, gaskets cylindrical Lock ((Approved by Palestine Standards Institution), and painting in three coats of oil paint in addition to primer coat. Price includes also aluminum louvers of 50x60cm in the bottom for store doors. All as per Detailed Drawings, specification. Size as per drawings	No.	8		
<b>B. Electrical Works</b>					
	<p>Preamble: All Supplied Materials Should be Local Made (if available), Grade A and Free From Defects, Having Supervisor Certificate From Palestinian Standard Institution (PSI).</p> <p>Price to include submittal and obtaining approval of shop drawings, detailed and as-built drawings for all works as well as coordinating the same with the other services, activities and furniture.</p> <p>Price to include, also, submittal of catalogues and manufacturer instruction. Fixtures and appliances shall be measured in number. Supply and feeder Cables, cable conduits and cable trays shall not be measured but included in DB's prices</p> <p>Manholes, handholds and the like shall be measured in number. All Systems and devices shall be in lump sum including installation, testing and commissioning.</p> <p>Rates of fixtures and appliances shall include installation, wiring, switches and conduit works.</p> <p>All systems equipment (Class A and approved by Palestine Standards Institution)</p>				
12.3.10	<p><b>Lighting points</b></p> <p>Supply, Install and Connect Lighting Points including fire proof boxes fire proof Conduits, fire retardant (E90) 3*1.5 mm2 cables and 5*1.5mm2 for emergency kits, Light Switches, and all accessories as per drawings and specifications. Price to also include any necessary painting or tiling after connecting the points.</p>	SET No.	3		
12.3.11	<p><b>Lighting fixtures</b></p> <p>Supply, Install and Connect the following high frequency control gear Lighting Fixtures including P.F. correction capacitors, Lamps, installation for all lighting fixtures using galvanized iron chains to suspend the fixtures in the ceiling and all accessories as per drawings and specifications. Supply and install Surface mounted Type A or Type B as per drawings</p>	SET No.	3		
<b>C. Mechanical Works</b>					

	<p>Preamble. Supply networks pipes To Tanks, or from on roof feeding tanks to collectors shall be priced in Linear meter. Water tanks shall be measured in number. , Sanitary Fixtures shall be measured in number, price to include cold and hot water pipes supply and fittings to collectors, also to include drain supply , fittings connection, to manholes. Drains, Floor Traps, Clean outs and the like shall be measured in number.</p> <p>Internal sanitary sewers network shall be included in the rates of sanitary fixtures and appliances. and the sanitary fixtures includes the cost of poexgol pipes for basins, toilets, science lab basins, home economics basins, ..etc., price also includes the connection to drainage network of these fixtures in sanitary units and labs. Vents and vertical stacks shall measured in linear meter. Manhole, Galleys and the like shall be measured in number. External sewers pipes shall be measured in linear meter for each individual diameter and material. Rates of all fittings , fixtures , appliances and pipe laying shall include:- Supply of material, workmanship, installation, testing and commissioning. Rates to include also all peace's and fittings, including by passes , floats, cleaning outlets , automatic vents, vents and stack covers, valves and non return valves and the like needed to complete works as per specifications. Insulation and painting as called for in specifications. Excavation and cutting for all pipe laying works, bedding back filling and all works connected with pipe laying. All ties, sleeves, joints, tie bolts and rods, brackets and the like. Rates to include Workshops, Coordinated and as- built drawings as approved by the Engineer. , the contractor should submit best quality, approved two brands for each mechanical works items for approval, and should be approved by PSI, any cut in blocks for installations should be done using special cutting machine, (all mechanical materials as sanitary fixtures fixtures, devices should be Italy made, Germany, Spanish made or equivalent )</p>				
12.3.12	<p>Remove the old toilets and supply &amp; Install Porcelain W.C. bowl class "A" white or colored , (Italy, Spanish made or equivalent) with heavy duty seat and cover. Price includes plastic flush tank, hanging iron steel bracket, bolts and nuts, as well as flexible flush hose , valve, porcelain paper holder, connection to pexogol pipe, connection to drainage and all related materials. Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include complete removal of the old toilets, replacement of any broken tiles, broken valves and then supplying new Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings as per specifications , drawing and as directed by supervision engineer.</p>	Complete Set	8		
12.3.13	<p>Supply &amp; Install Porcelain wall hung wash basin white or colored engineer of size 50 x 45 cm of approved brand (Italy, Spanish made or equivalent), Price shall include chromium plated mixer with chromium plated handle mounted on wall. the price also includes connection to Pexogol pipe, liquide soap holder , and all fixation and hanging bracket. Price includes supplying and installing 40x60cm mirror., semi pedestal and all other required materials, including connection to drainage system.</p>	Complete Set	3		
12.3.14	<p>Supply and install wall/window type exhaust fans of approved manufacture (European type or equal) complete with self – act automatic shutter. Price includes galvanized ducts, grills, shutter and making necessary holes in walls or glass and fixing, and wiring cables all as per specifications, and approval of supervisor engineer. The fan shall have it is own electrical wiring inside walls or ceiling, one socket/key etc. The price shall include any excavation, painting, plastering etc. all as shown in drawings, specifications, and approval of supervisor engineer. Extract Fan, 100 CFM</p>	No.	2		
12.3.15	<p>Supply and install floor cleanout 4" UPVC including stainless steel (sraled type) cover (15*15cm) complete with connection to drain pipes as located in drawings, specifications and approval of supervisor engineer</p>	No.	1		

12.3.16	Supply and install floor trap/drain 4" UPVC including stainless steel (sraled type) cover (15*15cm) complete with connection to drain pipes as located in drawings, specifications and approval of supervisor engineer	No.	12		
12.3.17	Supply, install and test Copper Collectors 3/4" dia., of approved brand. Price shall include all openings (eyes), and shall include for the required copper adaptors, hangers, supports, ties, air vents. Collectors shall be installed on walls, as shown on drawings. The work shall be completed as specified and according to the Engineer's instructions.	eye	22		
12.4	<b>Construction of New Handicap WASH unit</b>				
<b>A. Civil Works</b>					
12.4.1	Site clearance of any type of stairs, reinforced concrete, trees, branches, rocks, etc. in order to start the work. While keeping the trees intact and safe in order to re-plant the trees in a suitable place in accordance with the supervision engineer and to his approval.	LS	1.0		
12.4.2	Excavation for foundations and/or ground beam in any kind of soil or rock to the dimensions and levels shown in the drawings. (from N.G.L to bottom of hardcore layer) Price to include removal of extra and unsuitable soil to approved location. The price shall include reinstatement of any damage occurred during excavation. All as per drawings and specifications and supervision instructions.	M3	4.50		
12.4.3	Import and fill with selected Imported Approved Fill; to the required levels and where directed by the Engineer. Filling shall be on layers not to exceed 20cm. thick. Price to include leveling, watering and compacting to 98 % field density and all related works according to drawings and specifications and engineer instructions. The contractor to backfill using excavated soil if suitable or imported approved material.	M3	1.8		
12.4.4	Supply and Well Compact 40cm thick Base Coarse as per drawing compacted to min.98% of maximum dry density of modified Proctor, in layers 20cm thick. Price includes leveling, watering, leveling and compacting of ground (sub-base) under base coarse to min. 98% according to Field Density Test. Under foundation	M2	4.0		
12.4.5	Blinding Concrete grade 'B200' With a minimum cement content of 250 Kg. per cubic meter under footings and tie beams and where required, Thickness not less than 10cm thick, should be according to drawings. Price to include all required work according to specifications and drawings and engineer instruction.	M2	4.0		
12.4.6	Supply and Cast Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include shuttering, reinforcing , painting with two coats of hot bitumen (75/25) (for the buried parts) and all related works according to drawings and specifications and engineer instructions. For the foundations	M3	1.5		
12.4.7	Supply and Cast Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include shuttering, reinforcing , painting with two coats of hot bitumen (75/25) (for the buried parts) and all related works according to drawings and specifications and engineer instructions. For the ground beams	M3	1.8		

12.4.8	Supply and Cast Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include shuttering, reinforcing and all related works according to drawings and specifications and engineer instructions. For the columns	M3	1.4		
12.4.9	Supply and Cast 10 cm of Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include shuttering, reinforcing , compacted basecourse layers, painting with two coats of hot bitumen (75/25) (for the buried parts) and all related works according to drawings and specifications and engineer instructions. For the slab on grade	M2	6.5		
12.4.10	Supply and Cast 20 cm Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include shuttering, reinforcing , painting with two coats of hot bitumen (75/25) (for the buried parts) and all related works according to drawings and specifications and engineer instructions. For the solid slab including beams and drop beams	M2	7.0		
12.4.11	Supply and Build Concrete Block Walls, 'Grade 35' of any size blocks single or cavity . the measurements will be to one side only all done according to the dwg. specifications and Engineer instructions and approval. Hollow blocks 20 cm thick for the walls of the toilet. Price shall also include Supply and Cast Reinforced Concrete Grade 'B250 With a minimum cement content of 300 Kg. per cubic meter. Price also to include shuttering, reinforcing 4Ø10 and stirrups 1Ø8@25cm, and all related works according to drawings and specifications and engineer instructions. For the beams 20cmX 20cm above Hollow blocks	M <sup>2</sup>	32.0		
12.4.12	supply and install two Coats of Cement and Sand Plaster over one slurry coat to walls and ceilings and where required for External plastering. price include Waterproofing additive (W 290) with the second and last face and painting with standard approved color Waterproofing supercryl for External walls of the existing structure at the entrance. Price to also include 2 coats of external painting (supercryle). To the toilets.	M <sup>2</sup>	32.0		
12.4.13	Supply and paint three coats polycide paint for ceilings including corridor ceilings of high quality (Approved by Palestine Standards Institution) and by the supervision engineer.	M <sup>2</sup>	6.5		
12.4.14	Supply and paint high quality emulsion paint, for top walls and internal drop beams (sides and bottom), on one priming coat and two finishing coats, using two coats of complete putty, as per satisfaction of the supervisor engineer.	M <sup>2</sup>	8		



12.4.15	Supply & paint three coats of external quality waterproofing supercyle paint for Corridors (walls) and parapet wall according to drawings and specifications.	M <sup>2</sup>	32		
12.4.16	Supply and Fix Factory-made Steel Doors as per drawings, specification. Price to include frame (door) (as per details), fixing completely, ironmongery, cylinders, cylindrical locks handles (Approved by Palestine Standards Institution). 6 mm. glazing, gaskets, oil Paint in three coats in addition to two primer coats. A 40cm x 40cm sign made of Metal shall be fixed on the door. The sign should be colored and the icon and writing to be assigned by the supervision engineer, Dimensions: 1m *2.0m	No.	1		
12.4.17	Supply and Install Non-Slip Colored Ceramic Floor Tiles 0.6 cm Thickness. First choice and free from all defect grade "A". (Approved by Palestine Standards Institution). Price to include sand with cement filling (Grade B-100), pointing with white cement and cleaning on site, removal of the old tiles, leveling and all the necessary work to complete the job in accordance with the instructions of the supervision engineer.	M <sup>2</sup>	7		

12.4.18	Supply and Install White Glazed or colored Ceramic Wall Tiles 0.6 cm Thickness, First choice European type and free from all defects Grade "A". (Approved by Palestine Standards Institution). Price to include white round aluminum edges patching around services. Two coats of epoxy pointing .All works shall be in accordance with drawings and specifications.	M <sup>2</sup>	12.5		
12.4.19	Supply, fix and operate non sliding Aluminum Windows extrusion Section 7700 or equal, with protective electrostatic applied polyester powder paint of 70-80 microns. In color of bronze. Price to include 6.38mm thick laminated glass (3+0.38+3mm) for double glass. float glazing and all other accessories and fittings to complete works as per drawings and specifications. Dimensions of 0.7X 0.6 m Price shall include the steel protection from outside made of steel frame and steel wire mesh. Price shall also include painting, fixing etc.	No.	0.5		
12.4.20	Supply and apply app waterproofing membrane of bitumen rolls. (4 mm. of reinforced polyester sheets) covered with layer of white chipping, over roof slab and around parapets with overlaps of not less than 10 cm. Price to include primer coats of approval source according to specifications and engineer's instructions.	M <sup>2</sup>	6.5		
12.4.21	Supply and install Local marble threshold for under Doors and under windows 3-4 cm thickness	LS	1		
<b>B. Electrical Works</b>					
	Preamble: All Supplied Materials Should be Local Made (if available), Grade A and Free From Defects, Having Supervisor Certificate From Palestinian Standard Institution (PSI). Price to include submittal and obtaining approval of shop drawings, detailed and as-built drawings for all works as well as coordinating the same with the other services, activities and furniture. Price to include, also, submittal of catalogues and manufacturer instruction. Fixtures and appliances shall be measured in number. Supply and feeder Cables, cable conduits and cable trays shall not be measured but included in DB's prices Manholes, handholds and the like shall be measured in number. All Systems and devices shall be in lump sum including installation, testing and commissioning.				

12.4.22	<p><b>Lighting points</b> Supply, Install and Connect Lighting Points including fire proof boxes fire proof Conduits, fire retardant (E90) 3*1.5 mm2 cables and 5*1.5mm2 for emergency kits, Light Switches, and all accessories as per drawings and specifications. Price to also include any necessary painting or tiling after connecting the points.</p>	SET No.	1		
12.4.23	<p><b>Lighting fixtures</b> Supply, Install and Connect the following high frequency control gear Lighting Fixtures including P.F. correction capacitors, Lamps, installation for all lighting fixtures using galvanized iron chains to suspend the fixtures in the ceiling and all accessories as per drawings and specifications. Supply and install Surface mounted Type A or Type B as per drawings</p>	SET No.	1		
12.4.24	<p><b>Main Electrical Connection</b> Supply, Install and Connect 5x6mm2 XLPE cable include 1Φ1.5" PVC conduit from MDB to the new Unit. Price shall also include excavation, any necessary painting, plastering or tiling after connecting the points.</p>	L.M	15		
<b>C. Mechanical Works</b>					
	<p>Preamble. Supply networks pipes To Tanks, or from on roof feeding tanks to collectors shall be priced in Linear meter. Water tanks shall be measured in number. , Sanitary Fixtures shall be measured in number, price to include cold and hot water pipes supply and fittings to collectors, also to include drain supply , fittings connection, to manholes. Drains, Floor Traps, Clean outs and the like shall be measured in number. Internal sanitary sewers network shall be included in the rates of sanitary fixtures and appliances. and the sanitary fixtures includes the cost of poexgol pipes for basins, toilets, science lab basins, home economics basins, ..etc., price also includes the connection to drainage network of these fixtures in sanitary units and labs. Vents and vertical stacks shall measured in linear meter. Manhole, Galleys and the like shall be measured in number. External sewers pipes shall be measured in linear meter for each individual diameter and material. Rates of all fittings , fixtures , appliances and pipe laying shall include:- Supply of material, workmanship, installation, testing and commissioning. Rates to include also all peace's and fittings, including by passes , floats, cleaning outlets , automatic vents, vents and stack covers, valves and non return valves and the like needed to complete works as per specifications. Insulation and painting as called for in specifications. Excavation and cutting for all pipe laying works, bedding back filling and all works connected with pipe laying. All ties, sleeves, joints, tie bolts and rods, brackets and the like. Rates to include Workshops, Coordinated and as- built drawings as approved by the Engineer. , the contractor should submit best quality, approved two brands for each mechanical works items for approval, and should be approved by PSI, any cut in blocks for installations should be done using special cutting machine, (all mechanical materials as sanitary fixtures fixtures, devices should be Italy made, Germany, Spanish made or equivalent )</p>				
12.4.25	<p>Supply and Install White Vitreous Western type handicapped Toilet (Class A and approved by Palestine Standards Institution) Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings, accessories movable handle and fixed handle as shown on drawings and in Specifications. as per specifications , drawing and as directed by supervision Engineer.</p>	Complete Set	1		
12.4.26	<p>Supply and Install White Vitreous China handicapped Wash Basin(sliding type) (Class A and approved by Palestine Standards Institution), size (40 * 56) cm. Complete with all fittings, valves, waste pipes to nearest floor trap, taps or mixer (Class A and approved by Palestine Standards Institution), connection to water distribution, traps, and any other necessary parts as Specification and as directed by Eng. Price includes supplying and installing 40x60cm mirror. Gear tap.</p>	Complete Set	1		

12.4.27	Supply and install 6" UPVC pipes SN8 heavy duty, at least (4.9mm) thick, Local Made or equal and must be approved by Palestine Standard Institution, between manholes in with all required materials, sockets, fittings , rubber seals, elbow, etc. The price includes excavation ,backfilling of at least 15 cm sand above , below and around the pipes including back-filling of selected material above the sand, and disposal of surplus excavated materials. Excavation shall be to any depth, width, and in any type of soil or rock, connection for internal sewerage network to connect to existing or proposed new sewage network or the septic tank and insulation of septic tank wall after connection.	L.M	5		
12.4.28	Supply and install 4" galvanized vertical pipes heavy duty for rain water, Local Made or equal and must be approved by Palestine Standard Institution. Price includes digging for pipes, supports, hangers , and all rubber joints and sealants, and rainwater pipe end outlets from roof to ground.	L.M	4		
12.4.29	Heavy duty stainless steel 4" floor drain syphon trap with screw type screen and with closed covers for urinals , all of approved brand , complete with all required fittings and connections using reduced "T" for connecting sanitary fixtures, the traps in stairs to be with closed cover	No	1		
12.4.30	Supply and Install of Precast Concrete Manholes with minimum 15cm wall thickness for sewage and storm water drainage In compliance with specifications and Drawings. Price shall include excavation to any depth according to slopes, B200 reinforced concrete for base, back filling, cement plaster, benching, 8 or 25Ton Cast Iron cover as indicated , drop if needed, and all necessary works. all as shown in drawings, specifications, and approval of supervisor engineer. a. Ø60cm, 8 ton C.I cover	NO.	1		
12.4.31	Supply and install floor trap/drain 4" UPVC including stainless steel (sraled type) cover (15*15cm) complete with connection to drain pipes as located in drawings, specifications and approval of supervisor engineer	No.	1		
12.4.32	Supply and install floor cleanout 4" UPVC including stainless steel (sraled type) cover (15*15cm) complete with connection to drain pipes as located in drawings, specifications and approval of supervisor engineer	No.	1		
12.5	Rehabilitation of existing WASH units (Teacher WASH Unit)				
A. Civil Works					
12.5.1	Supply and Build Concrete Block Walls, 'Grade 35' of any size blocks single or cavity. The measurements will be to one side only all done according to the dwg. specifications and Engineer instructions and approval. Hollow blocks 10 cm thick for the partition walls. Price shall also include Supply and Cast Reinforced Concrete Grade 'B250 With a minimum cement content of 300 Kg. per cubic meter. Price also to include shuttering, reinforcing 4Ø10 and stirrups 1Ø8@25cm, and all related works according to drawings and specifications and engineer instructions. For the beams 20cmX 10cm above Hollow blocks	M <sup>2</sup>	3.5		
12.5.2	Supply and paint three coats polycide paint for ceilings including corridor ceilings of high quality (Approved by Palestine Standards Institution) and by the supervision engineer.	M <sup>2</sup>	9		
12.5.3	Supply and paint high quality emulsion paint, for top walls and internal drop beams (sides and bottom), on one priming coat and two finishing coats, using two coats of complete putty, as per satisfaction of the supervisor engineer.	M <sup>2</sup>	10		

12.5.4	Supply and Fix Factory-made Steel Doors as per drawings, specification. Price to include frame (door) (as per details), fixing completely, ironmongery, cylinders, cylindrical locks handles (Approved by Palestine Standards Institution). 6 mm. glazing, gaskets, oil Paint in three coats in addition to two primer coats. A 40cm x 40cm sign made of Metal shall be fixed on the door. The sign should be colored and the icon and writing to be assigned by the supervision engineer.	No.	1		
12.5.5	Supply and Install Non-Slip Colored Ceramic Floor Tiles 0.6 cm Thickness. First choice and free from all defect grade "A". (Approved by Palestine Standards Institution). Price to include sand with cement filling (Grade B-100), pointing with white cement and cleaning on site, removal of the old tiles, leveling and all the necessary work to complete the job in accordance with the instructions of the supervision engineer.	M <sup>2</sup>	10		
12.5.6	Supply and Install White Glazed or colored Ceramic Wall Tiles 0.6 cm Thickness, First choice European type and free from all defects Grade "A". (Approved by Palestine Standards Institution). Price to include white round aluminum edges patching around services. Two coats of epoxy pointing ..All works shall be in accordance with drawings and specifications.	M <sup>2</sup>	72		
12.5.7	Supply, fix and operate non sliding Aluminum Windows extrusion Section 7700 or equal, with protective electrostatic applied polyester powder paint of 70-80 microns. In color of bronze. Price to include 6.38mm thick laminated glass (3+0.38+3mm) for double glass. float glazing and all other accessories and fittings to complete works as per drawings and specifications. Price shall include the steel protection from outside made of steel frame and steel wire mesh. Price shall also include painting, fixing etc.	M <sup>2</sup>	1.0		
12.5.8	Supply and install Local marble threshold for under Doors and under windows 3-4 cm thickness. All as per drawings, specifications and supervision engineer.	L.S	1		
12.5.9	Supply and Fix Wooden Doors 4.5 cm Thick single or double sashes. With (Frame).(4.5*3.5) cm hardwood (Zan) edging and (3.5*9.5) cm soft wood stile. Edge strip banding of width 4.5 mm. Formica over veneer on both sides, color for frames and Architrave as directed by engineer. Door paneling to be soft wood 4.5*3.5 cm. each 4 cm., frames of galvanized steel sheet frame of 2mm thick for corridor doors ( as per drawings), width according to the wall thickness' and Allowance of 4 - 6 cm. thickness for plastering and tiling purposes, immersed in wood preservative before erection then embedded completely in sand - cement mortar and completely anchored as per specification. Architrave of Hardwood (Swedish)(4*1.2)cm, price to include ironmongery, kick plates of aluminum 20cm height from one side for main bath room doors, U shaped 10cm height from both sides at the bottom for internal doors kick plates of aluminum 20cm height for bath room doors, U shaped both sides, and at the bottom door stoppers, transparent fiber glass 6mm thick for both upper vision panel & for vision panel inside door leaf, gaskets cylindrical Lock ((Approved by Palestine Standards Institution), and painting in three coats of oil paint in addition to primer coat. Price includes also aluminum louvers of 50x60cm in the bottom for store doors. All as per Detailed Drawings, specification. Size as per drawings	No.	2		
<b>B. Electrical Works</b>					
	<p>Preamble: All Supplied Materials Should be Local Made (if available), Grade A and Free From Defects, Having Supervisor Certificate From Palestinian Standard Institution (PSI).</p> <p>Price to include submittal and obtaining approval of shop drawings, detailed and as-built drawings for all works as well as coordinating the same with the other services, activities and furniture.</p> <p>Price to include, also, submittal of catalogues and manufacturer instruction. Fixtures and appliances shall be measured in number. Supply and feeder Cables, cable conduits and cable trays shall not be measured but included in DB's prices</p> <p>Manholes, handholds and the like shall be measured in number. All Systems and devices shall be in lump sum including installation, testing and commissioning.</p> <p>Rates of fixtures and appliances shall include installation, wiring, switches and conduit works.</p> <p>All systems equipment (Class A and approved by Palestine Standards Institution)</p>				

12.5.10	<b>Lighting points</b> Supply, Install and Connect Lighting Points including fire proof boxes fire proof Conduits, fire retardant (E90) 3*1.5 mm2 cables and 5*1.5mm2 for emergency kits, Light Switches, and all accessories as per drawings and specifications. Price to also include any necessary painting or tiling after connecting the points.	SET No.	2		
12.5.11	<b>Lighting fixtures</b> Supply, Install and Connect the following high frequency control gear Lighting Fixtures including P.F. correction capacitors, Lamps, installation for all lighting fixtures using galvanized iron chains to suspend the fixtures in the ceiling and all accessories as per drawings and specifications. Supply and install 30X120 cm 34W/3700lm LED recessed modular panel with aluminum frame and opal diffuser, color temp. 4000K UGR<19, IP40	SET No.	2		
<b>C. Mechanical Works</b>					
	Preamble. Supply networks pipes To Tanks, or from on roof feeding tanks to collectors shall be priced in Linear meter. Water tanks shall be measured in number. , Sanitary Fixtures shall be measured in number, price to include cold and hot water pipes supply and fittings to collectors, also to include drain supply , fittings connection, to manholes. Drains, Floor Traps, Clean outs and the like shall be measured in number. Internal sanitary sewers network shall be included in the rates of sanitary fixtures and appliances. and the sanitary fixtures includes the cost of poexgol pipes for basins, toilets, science lab basins, home economics basins, ..etc., price also includes the connection to drainage network of these fixtures in sanitary units and labs. Vents and vertical stacks shall measured in linear meter. Manhole, Galleys and the like shall be measured in number. External sewers pipes shall be measured in linear meter for each individual diameter and material. Rates of all fittings , fixtures , appliances and pipe laying shall include:- Supply of material, workmanship, installation, testing and commissioning. Rates to include also all peace's and fittings, including by passes , floats, cleaning outlets , automatic vents, vents and stack covers, valves and non return valves and the like needed to complete works as per specifications. Insulation and painting as called for in specifications. Excavation and cutting for all pipe laying works, bedding back filling and all works connected with pipe laying. All ties, sleeves, joints, tie bolts and rods, brackets and the like. Rates to include Workshops, Coordinated and as- built drawings as approved by the Engineer. , the contractor should submit best quality, approved two brands for each mechanical works items for approval, and should be approved by PSI, any cut in blocks for installations should be done using special cutting machine, (all mechanical materials as sanitary fixtures fixtures, devices should be Italy made, Germany, Spanish made or equivalent )				
12.5.12	Supply & Install Porcelain W.C. bowl class "A" white or colored , (Italy, Spanish made or equivalent) with heavy duty seat and cover. Price includes plastic flush tank, hanging iron steel bracket, bolts and nuts, as well as flexible flush hose , valve, porcelain paper holder, connection to pexogol pipe, connection to drainage and all related materials. Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include complete removal of the old toilets, replacement of any broken tiles, broken valves and then supplying new Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings as per specifications , drawing and as directed by supervision engineer.	Complete Set	2		
12.5.13	Supply & Install Porcelain wall hung wash basin white or colored engineer of size 50 x 45 cm of approved brand (Italy, Spanish made or equivalent), Price shall include chromium plated mixer with chromium plated handle mounted on wall. the price also includes connection to Pexogol pipe, liquide soap holder , and all fixation and hanging bracket. Price includes supplying and installing 40x60cm mirror., semi pedestal and all other required materials, including connection to drainage system.	Complete Set	1		
12.5.14	Supply and install wall/window type exhaust fans of approved manufacture (European type or equal) complete with self – act automatic shutter. Price includes galvanized ducts, grills, shutter and making necessary holes in walls or glass and fixing, and wiring cables all as per specifications, and approval of supervisor engineer. The fan shall have it is own electrical wiring inside walls or ceiling, one soke/key etc. The price shall include any excavation, painting, plastering etc. all as shown in drawings, specifications, and approval of supervisor engineer. Extract Fan, 100 CFM	No.	2		

<b>12.5.15</b>	Supply and install floor cleanout 4" UPVC including stainless steel (sraled type) cover (15*15cm) complete with connection to drain pipes as located in drawings, specifications and approval of supervisor engineer	No.	1		
<b>12.5.16</b>	Supply and install floor trap/drain 4" UPVC including stainless steel (sraled type) cover (15*15cm) complete with connection to drain pipes as located in drawings, specifications and approval of supervisor engineer	No.	3		
<b>12.5.17</b>	Supply, install and test Copper Collectors 3/4" dia., of approved brand. Price shall include all openings (eyes), and shall include for the required copper adaptors, hangers, supports, ties, air vents. Collectors shall be installed on walls, as shown on drawings. The work shall be completed as specified and according to the Engineer's instructions.	eye	6		
<b>Total Al Zawiya Secondary Boys School (NIS)</b>					

BILLS OF QUANTITIES					
CONSULTANT: Universal Group for Engineering and Consulting			DATE: March 2023		
Deir Ballout Secondary Boys School					
ITEM No.	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (ILS)	AMOUNT (ILS)
13.1	Preliminary Items				
13.1.1	Supply and installation of the project marble sign (110 cm x 70cm) that include coloured project information. The Contractor shall do the design and fix the sign as per the supervision engineer instructions. The price shall include fixing the sign properly with all required drilling, jumbo bolts, rehabilitation of any damages occurred during fixation.	No.	1		
13.1.2	Demolishing works inside the WASH facilities (WCs) that intersects with the designed structure in accordance with the drawings. The price shall include remove all demolished materials to approved locations outside the schools as per the supervision engineer instructions. Price also include demolish of all floors and walls tiles.	L.S	1		
13.1.3	Remove carefully works inside the WASH facilities (WCs). The price shall include but not limited to remove carefully, main doors, WC doors, sinks, wash basins, lighting Points, Collectors, accessories, taps, etc. all as per drawings, and Engineer instructions. The Contractor shall transport all removed materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
13.1.4	<u>Door and windows Opening in Reinforced Concrete or Hollow Block</u> Allow for every expenses to make a door opening in RE concrete wall. The price shall also include all needed works to complete the works as per drawings, specifications and engineer instructions. The Contractor shall transport all removed materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
13.2	External Works				
13.2.1	<u>Awning Works</u> Supply and install steel awning at one location or several location as per the detail in the drawing and as per supervision engineer. The price shall also include all steel tubes (columns, horizontal, vertical etc.), steel corrugated sheets, drain gutters, steel bolts, excavation, backfilling, reinforced concrete foundations, reinstatement, 3 Inch galvanized Steel rain water, painting, the fixation, joints, angles and whatever necessary to complete the work in accordance with the drawings, specifications and to the approval of the supervision engineer. Price to include any required works including but not limited to, sealant works, fixing, fastening, welding etc. The Hight of the awning as per drawings or 3.5 meter if not mentioned. The final location or several locations of awning will be fixed during the shop drawing phase and as instructed by the supervision engineer, the Contractor shall not claim for additional cost or object.	m2	25		



<b>13.3</b>	<b>Rehabilitation of existing WASH units</b>				
<b>A. Civil Works</b>					
<b>13.3.1</b>	Supply and Build Concrete Block Walls, 'Grade 35' of any size blocks single or cavity. The measurements will be to one side only all done according to the dwg. specifications and Engineer instructions and approval. Hollow blocks 10 cm thick for the partition walls. Price shall also include Supply and Cast Reinforced Concrete Grade 'B250 With a minimum cement content of 300 Kg. per cubic meter. Price also to include shuttering, reinforcing 4Ø10 and stirrups 1Ø8@25cm, and all related works according to drawings and specifications and engineer instructions. For the beams 20cmX 10cm above Hollow blocks	M <sup>2</sup>	9.0		
<b>13.3.2</b>	Supply and paint three coats polycide paint for ceilings including corridor ceilings of high quality (Approved by Palestine Standards Institution) and by the supervision engineer.	M <sup>2</sup>	24		
<b>13.3.3</b>	Supply and paint high quality emulsion paint, for top walls and internal drop beams (sides and bottom), on one priming coat and two finishing coats, using two coats of complete putty, as per satisfaction of the supervisor engineer.	M <sup>2</sup>	16		
<b>13.3.4</b>	Supply and Fix Factory-made Steel Doors as per drawings, specification. Price to include frame (door) (as per details), fixing completely, ironmongery, cylinders, cylindrical locks handles (Approved by Palestine Standards Institution). 6 mm. glazing, gaskets, oil Paint in three coats in addition to two primer coats. A 40cm x 40cm sign made of Metal shall be fixed on the door. The sign should be coloured and the icon and writing to be assigned by the supervision engineer, Dimensions: 1m *2.0m	No.	2		
<b>13.3.5</b>	Supply and Install Non-Slip Coloured Ceramic Floor Tiles 0.6 cm Thickness. First choice and free from all defect grade "A". (Approved by Palestine Standards Institution). Price to include sand with cement filling (Grade B-100), pointing with white cement and cleaning on site, removal of the old tiles, levelling and all the necessary work to complete the job in accordance with the instructions of the supervision engineer.	M <sup>2</sup>	24		
<b>13.3.6</b>	Supply and Install White Glazed or coloured Ceramic Wall Tiles 0.6 cm Thickness, First choice European type and free from all defects Grade "A". (Approved by Palestine Standards Institution). Price to include white round aluminium edges patching around services. Two coats of epoxy pointing ..All works shall be in accordance with drawings and specifications.	M <sup>2</sup>	80		
<b>13.3.7</b>	Supply, fix and operate non sliding Aluminium Windows extrusion Section 7700 or equal, with protective electrostatic applied polyester powder paint of 70-80 microns. Price to include 6.38mm thick laminated glass (3+0.38+3mm) for double glass. float glazing and all other accessories and fittings to complete works as per drawings and specifications. Price shall include the steel protection from outside made of steel frame and steel wire mesh. Price shall also include painting, fixing etc.	M <sup>2</sup>	5.0		
<b>13.3.8</b>	Supply and install Local marble threshold for under Doors and under windows 3-4 cm thickness. All as per drawings, specifications and supervision engineer.	m2	3		

13.3.9	Supply and Fix Wooden Doors 4.5 cm Thick single or double sashes. With (Frame),(4.5*3.5) cm hardwood (Zan) edging and (3.5*9.5) cm soft wood stile. Edge strip banding of width 4.5 mm. Formica over veneer on both sides, colour for frames and Architrave as directed by engineer. Door paneling to be soft wood 4.5*3.5 cm. each 4 cm., frames galvanized steel sheet frame of 2mm thick for corridor doors ( as per drawings), width according to the wall thickness' and Allowance of 4 - 6 cm. thickness for plastering and tiling purposes, immersed in wood preservative before erection then embedded completely in sand - cement mortar and completely anchored as per specification. Architrave of Hardwood (Swedish)(4*1.2)cm, price to include ironmongery, kick plates of aluminium 20cm height from one side for main bath room doors, U shaped 10cm height from both sides at the bottom for internal doors kick plates of aluminium 20cm height for bath room doors, U shaped both sides, and at the bottom door stoppers, transparent fiber glass 6mm thick for both upper vision panel & for vision panel inside door leaf, gaskets cylindrical Lock ((Approved by Palestine Standards Institution), and painting in three coats of oil paint in addition to primer coat. Price includes also aluminium louvers of 50x60cm in the bottom for store doors. All as per Detailed Drawings, specification. Size as per drawings	No.	4		
<b>B. Electrical Works</b>					
	<p>Preamble: All Supplied Materials Should be Local Made (if available), Grade A and Free From Defects, Having Supervisor Certificate From Palestinian Standard Institution (PSI).</p> <p>Price to include submittal and obtaining approval of shop drawings, detailed and as-built drawings for all works as well as coordinating the same with the other services, activities and furniture.</p> <p>Price to include, also, submittal of catalogues and manufacturer instruction. Fixtures and appliances shall be measured in number. Supply and feeder Cables, cable conduits and cable trays shall not be measured but included in DB's prices</p> <p>Manholes, handholds and the like shall be measured in number. All Systems and devices shall be in lump sum including installation, testing and commissioning.</p> <p>Rates of fixtures and appliances shall include installation, wiring, switches and conduit works.</p> <p>All systems equipment (Class A and approved by Palestine Standards Institution)</p>				
13.3.10	<p><b>Lighting points</b></p> <p>Supply, Install and Connect Lighting Points including fire proof boxes fire proof Conduits, fire retardant (E90) 3*1.5 mm2 cables and 5*1.5mm2 for emergency kits, Light Switches, and all accessories as per drawings and specifications. Price to also include any necessary painting or tiling after connecting the points.</p>	SET No.	4		
13.3.11	<p><b>Main Electrical Connection</b></p> <p>Supply, Install and Connect 5x6mm2 XLPE cable include 1Φ1.5" PVC conduit from MDB to the new Unit. Price shall include installation of a new electrical breaker in the main MDB. Price shall also include excavation, any necessary painting, plastering or tiling after connecting the points.</p>	SET No.	4		
<b>C. Mechanical Works</b>					

	<p>Preamble. Supply networks pipes To Tanks, or from on roof feeding tanks to collectors shall be priced in Linear meter. Water tanks shall be measured in number. , Sanitary Fixtures shall be measured in number, price to include cold and hot water pipes supply and fittings to collectors, also to include drain supply , fittings connection, to manholes. Drains, Floor Traps, Clean outs and the like shall be measured in number.</p> <p>Internal sanitary sewers network shall be included in the rates of sanitary fixtures and appliances. and the sanitary fixtures includes the cost of poexgol pipes for basins, toilets, science lab basins, home economics basins, ..etc., price also includes the connection to drainage network of these fixtures in sanitary units and labs. Vents and vertical stacks shall measured in linear meter. Manhole, Galleys and the like shall be measured in number. External sewers pipes shall be measured in linear meter for each individual diameter and material. Rates of all fittings , fixtures , appliances and pipe laying shall include:- Supply of material, workmanship, installation, testing and commissioning. Rates to include also all peace's and fittings, including by passes , floats, cleaning outlets , automatic vents, vents and stack covers, valves and non return valves and the like needed to complete works as per specifications. Insulation and painting as called for in specifications. Excavation and cutting for all pipe laying works, bedding back filling and all works connected with pipe laying. All ties, sleeves, joints, tie bolts and rods, brackets and the like. Rates to include Workshops, Coordinated and as- built drawings as approved by the Engineer. , the contractor should submit best quality, approved two brands for each mechanical works items for approval, and should be approved by PSI, any cut in blocks for installations should be done using special cutting machine, (all mechanical materials as sanitary fixtures fixtures, devices should be Italy made, Germany, Spanish made or equivalent )</p>				
13.3.12	<p>Remove the old toilets (Arabic Style) and supply &amp; Install Porcelain W.C. bowl class "A" white or coloured , (Italy, Spanish made or equivalent) with heavy duty seat and cover. Price includes plastic flush tank, hanging iron steel bracket, bolts and nuts, as well as flexible flush hose , valve, porcelain paper holder, connection to pexogol pipe, connection to drainage and all related materials. Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include complete removal of the old toilets, replacement of any broken tiles, broken valves and then supplying new Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings as per specifications , drawing and as directed by supervision engineer.</p>	Complete Set	2		
13.3.13	<p>Remove the old Arabic Style toilets and supply &amp; Install a new one with all its accessories. Price includes plastic flush tank, hanging iron steel bracket, bolts and nuts, as well as flexible flush hose , valve, porcelain paper holder, connection to pexogol pipe, connection to drainage and all related materials. Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include complete removal of the old toilets, replacement of any broken tiles, broken valves and then supplying new Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings as per specifications , drawing and as directed by supervision engineer.</p>	Complete Set	2		
13.3.14	<p>Supply &amp; Install Porcelain wall hung wash basin white or coloured engineer of size 50 x 45 cm of approved brand (Italy, Spanish made or equivalent), Price shall include chromium plated mixer with chromium plated handle mounted on wall. the price also includes connection to Pexogol pipe, liquide soap holder , and all fixation and hanging bracket. Price includes supplying and installing 40x60cm mirror., semi pedestal and all other required materials, including connection to drainage system.</p>	Complete Set	3		
13.3.15	<p>Supply and Install White Vitreous Western type handicapped Toilet (Class A and approved by Palestine Standards Institution) Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings, accessories movable handle and fixed handle as shown on drawings and in Specifications. as per specifications , drawing and as directed by supervision Engineer.</p>	Complete Set	1		

<b>13.3.16</b>	Supply and Install White Vitreous China handicapped Wash Basin(sliding type) (Class A and approved by Palestine Standards Institution), size (40 * 56) cm. Complete with all fittings, valves, waste pipes to nearest floor trap, taps or mixer (Class A and approved by Palestine Standards Institution), connection to water distribution, traps, and any other necessary parts as Specification and as directed by Eng. Price includes supplying and installing 40x60cm mirror. Gear tap.	Complete Set	1		
<b>13.3.17</b>	Supply and install 4" UPVC pipes SN8 heavy duty, at least (4.9mm) thick, Local Made or equal and must be approved by Palestine Standard Institution, between manholes in with all required materials, sockets, fittings, rubber seals, elbow, etc. The price includes excavation, backfilling of at least 15 cm sand above, below and around the pipes including back-filling of selected material above the sand, and disposal of surplus excavated materials. Excavation shall be to any depth, width, and in any type of soil or rock, connection for internal sewerage network to connect to existing or proposed new sewage network or the septic tank and insulation of septic tank wall after connection.	L.M	4		
<b>13.3.18</b>	Supply and install wall/window type exhaust fans of approved manufacture (European type or equal) complete with self – act automatic shutter. Price includes galvanized ducts, grills, shutter and making necessary holes in walls or glass and fixing, and wiring cables all as per specifications, and approval of supervisor engineer. The fan shall have it is own electrical wiring inside walls or ceiling, one socket/key etc. The price shall include any excavation, painting, plastering etc. all as shown in drawings, specifications, and approval of supervisor engineer. Extract Fan, 100 CFM	No.	4		
<b>13.3.19</b>	Supply and install floor cleanout 4" UPVC including stainless steel (sraled type) cover (15*15cm) complete with connection to drain pipes as located in drawings, specifications and approval of supervisor engineer	No.	1		
<b>13.3.20</b>	Supply and install floor trap/drain 4" UPVC including stainless steel (sraled type) cover (15*15cm) complete with connection to drain pipes as located in drawings, specifications and approval of supervisor engineer	No.	3		
<b>13.3.21</b>	Supply, install and test Copper Collectors 3/4" dia., of approved brand. Price shall include all openings (eyes), and shall include for the required copper adaptors, hangers, supports, ties, air vents. Collectors shall be installed on walls, as shown on drawings. The work shall be completed as specified and according to the Engineer's instructions.	eye	15		
<b>Total Deir Ballout Secondary Boys School (NIS)</b>					

BILLS OF QUANTITIES					
CONSULTANT: Universal Group for Engineering and Consulting			DATE: March 2023		
Far'oun Preparatory Boys School					
ITEM No.	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (ILS)	AMOUNT (ILS)
14.1	Preliminary Items				
14.1.1	Supply and installation of the project marble sign (110 cm x 70cm) that include coloured project information. The Contractor shall do the design and fix the sign as per the supervision engineer instructions. The price shall include fixing the sign properly with all required drilling, jumbo bolts, rehabilitation of any damages occurred during fixation.	No.	1		
14.1.2	Demolishing works inside the WASH facilities (WCs) that intersects with the designed structure in accordance with the drawings. The price shall include remove all demolished materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
14.1.3	Remove carefully works inside the WASH facilities (WCs). The price shall include but not limited to remove carefully, main doors, WC doors, sinks, wash basins, lighting Points, Collectors, accessories, taps, etc. all as per drawings, and Engineer instructions. The Contractor shall transport all removed materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
14.1.4	<b>Door and windows Opening in Reinforced Concrete or Hollow Block</b> Allow for every expenses to make a door opening in RE concrete wall or hollow block wall. The price shall also include all needed works to complete the works as per drawings, specifications and engineer instructions. The Contractor shall transport all removed materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
14.1.5	<b>Extension of existing Slab on Grade</b> Supply and Cast 25 cm of Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include reinforcing 1Ø14@20cm both way shuttering, reinforcing, and all related works according to drawings and specifications and engineer instructions. For the slab on grade for the ramp	M2	3		
14.2	External Works				
14.2.1	<b>Drinking Fountain Works:</b> Remove the old Drinking Fountain Supply and install outside drinking fountain as shown on drawings, rate includes, sink 4.35X0.75m on block stands, the work should be finished and completed to the highest standard. Rate include excavation, B200 R. concrete (all steel reinforcement required), stone works, plastering, glazing tiles, local marble coping, planters and metal cover with all fittings, 8 unit high quality (Class A and approved by Palestine Standards Institution) chrome plated taps of approved kind, rates also include p.v.c. Drainpipe outlet to green area or as per drawings.	L.S	1		
14.2.2	<b>Awning Works</b> Supply and install steel awning at one location or several location as per the detail in the drawing and as per supervision engineer. The price shall also include all steel tubes (columns, horizontal, vertical etc.), steel corrugated sheets, drain gutters, steel bolts, excavation, backfilling, reinforced concrete foundations, reinstatement, 3 Inch galvanized Steel rain water, painting, the fixation, joints, angles and whatever necessary to complete the work in accordance with the drawings, specifications and to the approval of the supervision engineer. Price to include any required works including but not limited to, sealant works, fixing, fastening, welding etc. The Hight of the awning as per drawings or 3.5 meter if not mentioned. The final location or several locations of awning will be fixed during the shop drawing phase and as instructed by the supervision engineer, the Contractor shall not claim for additional cost or object.	m2	25		

14.2.3	<p><b>Handicap Ramp Works:</b> Rehabilitation and extension of Existing handicap ramp. The price shall include rehabilitation, extension, supply and Build handicap ramp floor with (زفراف). The price shall include excavation, backfilling, reinstatement, demolish of all obstacles, reinforced concrete etc., in accordance with the drawings, details, specifications and to the instructions of the supervision engineer. The price shall include supply and install of a new handrail with total length of Handrails is 25 meter of 50mm steel pipes and to include Fixing completely, oil paint three coats in addition to primer coat the hand rails are to be on both sides of the ramp. Price to also include chakered plate, and PVC rubber to the height 2m to the columns. The Contractor to submit shop drawings and details to be approved by the Engineers. Price includes cleaning, plastering and painting the wall adjacent to the newly installed ramp.</p>	L.S	1		
14.2.4	<p><b>Rehabilitation of the area around the WASH unit</b> allow for every expenses to do a Rehabilitation of the area around the WASH unit. The price shall include replace of 4 manhole covers, replace of 4 and 6 inch UPVC elbows with cleanout opening, cast and build reinforced concrete stairs, supply and install marble (3-4 cm thickness), repair the wires to be inside the walls etc.</p>	L.S	1		
14.3	<b>Rehabilitation of existing WASH units</b>				
<b>A. Civil Works</b>					
14.3.1	<p>Supply and Build Concrete Block Walls, 'Grade 35' of any size blocks single or cavity. The measurements will be to one side only all done according to the dwg. specifications and Engineer instructions and approval. Hollow blocks 10 cm thick for the partition walls. Price shall also include Supply and Cast Reinforced Concrete Grade 'B250 With a minimum cement content of 300 Kg. per cubic meter. Price also to include shuttering, reinforcing 4Ø10 and stirrups 1Ø8@25cm, and all related works according to drawings and specifications and engineer instructions. For the beams 20cmX 10cm above Hollow blocks</p>	M <sup>2</sup>	7.0		
14.3.2	<p>Supply and paint three coats polycide paint for ceilings including corridor ceilings of high quality (Approved by Palestine Standards Institution) and by the supervision engineer.</p>	M <sup>2</sup>	48		
14.3.3	<p>Supply and paint high quality emulsion paint, for top walls and internal drop beams (sides and bottom), on one priming coat and two finishing coats, using two coats of complete putty, as per satisfaction of the supervisor engineer.</p>	M <sup>2</sup>	25		
14.3.4	<p>Supply and Fix Factory-made Steel Doors as per drawings, specification. Price to include frame (door) (as per details), fixing completely, ironmongery, cylinders, cylindrical locks handles (Approved by Palestine Standards Institution). 6 mm. glazing, gaskets, oil Paint in three coats in addition to two primer coats. A 40cm x 40cm sign made of Metal shall be fixed on the door. The sign should be coloured and the icon and writing to be assigned by the supervision engineer, Dimensions: 1m *2.0m</p>	No.	3		
14.3.5	<p>Supply and Install Non-Slip Coloured Ceramic Floor Tiles 0.6 cm Thickness. First choice and free from all defect grade "A". (Approved by Palestine Standards Institution). Price to include sand with cement filling (Grade B-100), pointing with white cement and cleaning on site, removal of the old tiles, levelling and all the necessary work to complete the job in accordance with the instructions of the supervision engineer.</p>	M <sup>2</sup>	50		

14.3.6	Supply and Install White Glazed or coloured Ceramic Wall Tiles 0.6 cm Thickness, First choice European type and free from all defects Grade "A". (Approved by Palestine Standards Institution). Price to include white round aluminium edges patching around services. Two coats of epoxy pointing ..All works shall be in accordance with drawings and specifications.	M <sup>2</sup>	155		
14.3.7	Supply, fix and operate non sliding Aluminium Windows extrusion Section 7700 or equal, with protective electrostatic applied polyester powder paint of 70-80 microns. Price to include 6.38mm thick laminated glass (3+0.38+3mm) for double glass. float glazing and all other accessories and fittings to complete works as per drawings and specifications. Price shall include the steel protection from outside made of steel frame and steel wire mesh. Price shall also include painting, fixing etc.	M <sup>2</sup>	10		
14.3.8	Supply and install Local marble threshold for under Doors and under windows 3-4 cm thickness. All as per drawings, specifications and supervision engineer.	m2	7		
14.3.9	Supply and Fix Wooden Doors 4.5 cm Thick single or double sashes. With (Frame).(4.5*3.5) cm hardwood (Zan) edging and (3.5*9.5) cm soft wood stile. Edge strip banding of width 4.5 mm. Formica over veneer on both sides, colour for frames and Architrave as directed by engineer. Door paneling to be soft wood 4.5*3.5 cm. each 4 cm., frames of galvanized steel sheet frame of 2mm thick for corridor doors ( as per drawings), width according to the wall thickness' and Allowance of 4 - 6 cm. thickness for plastering and tiling purposes, immersed in wood preservative before erection then embedded completely in sand - cement mortar and completely anchored as per specification. Architrave of Hardwood (Swedish)(4*1.2)cm, price to include ironmongery, kick plates of aluminium 20cm height from one side for main bath room doors, U shaped 10cm height from both sides at the bottom for internal doors kick plates of aluminium 20cm height for bath room doors, U shaped both sides, and at the bottom door stoppers, transparent fiber glass 6mm thick for both upper vision panel & for vision panel inside door leaf, gaskets cylindrical Lock ((Approved by Palestine Standards Institution), and painting in three coats of oil paint in addition to primer coat. Price includes also aluminium louvers of 50x60cm in the bottom for store doors. All as per Detailed Drawings, specification. Size as per drawings	No.	10		
<b>B. Electrical Works</b>					
	Preamble: All Supplied Materials Should be Local Made (if available), Grade A and Free From Defects, Having Supervisor Certificate From Palestinian Standard Institution (PSI). Price to include submittal and obtaining approval of shop drawings, detailed and as-built drawings for all works as well as coordinating the same with the other services, activities and furniture. Price to include, also, submittal of catalogues and manufacturer instruction. Fixtures and appliances shall be measured in number. Supply and feeder Cables, cable conduits and cable trays shall not be measured but included in DB's prices Manholes, handholds and the like shall be measured in number. All Systems and devices shall be in lump sum including installation, testing and commissioning. Rates of fixtures and appliances shall include installation, wiring, switches and conduit works. All systems equipment (Class A and approved by Palestine Standards Institution)				
14.3.11	<b>Lighting points</b> Supply, Install and Connect Lighting Points including fire proof boxes fire proof Conduits, fire retardant (E90) 3*1.5 mm2 cables and 5*1.5mm2 for emergency kits, Light Switches, and all accessories as per drawings and specifications. Price to also include any necessary painting or tiling after connecting the points.	SET No.	6		

14.3.12	<p><b>Lighting fixtures</b> Supply, Install and Connect the following high frequency control gear Lighting Fixtures including P.F. correction capacitors, Lamps, installation for all lighting fixtures using galvanized iron chains to suspend the fixtures in the ceiling and all accessories as per drawings and specifications. Supply and install Surface mounted Type A or Type B as per drawings</p>	SET No.	6		
<b>C. Mechanical Works</b>					
	<p>Preamble. Supply networks pipes To Tanks, or from on roof feeding tanks to collectors shall be priced in Linear meter. Water tanks shall be measured in number. , Sanitary Fixtures shall be measured in number, price to include cold and hot water pipes supply and fittings to collectors, also to include drain supply , fittings connection, to manholes. Drains, Floor Traps, Clean outs and the like shall be measured in number.</p> <p>Internal sanitary sewers network shall be included in the rates of sanitary fixtures and appliances. and the sanitary fixtures includes the cost of poexgol pipes for basins, toilets, science lab basins, home economics basins, ..etc., price also includes the connection to drainage network of these fixtures in sanitary units and labs. Vents and vertical stacks shall measured in linear meter. Manhole, Galleys and the like shall be measured in number. External sewers pipes shall be measured in linear meter for each individual diameter and material. Rates of all fittings , fixtures , appliances and pipe laying shall include:- Supply of material, workmanship, installation, testing and commissioning. Rates to include also all peace's and fittings, including by passes , floats, cleaning outlets , automatic vents, vents and stack covers, valves and non return valves and the like needed to complete works as per specifications. Insulation and painting as called for in specifications. Excavation and cutting for all pipe laying works, bedding back filling and all works connected with pipe laying. All ties, sleeves, joints, tie bolts and rods, brackets and the like. Rates to include Workshops, Coordinated and as- built drawings as approved by the Engineer. , the contractor should submit best quality, approved two brands for each mechanical works items for approval, and should be approved by PSI, any cut in blocks for installations should be done using special cutting machine, (all mechanical materials as sanitary fixtures fixtures, devices should be Italy made, Germany, Spanish made or equivalent )</p>				
14.3.13	<p>Remove the old Arabic style or toilets and supply &amp; Install Porcelain W.C. bowl class "A" white or coloured , (Italy, Spanish made or equivalent) with heavy duty seat and cover. Price includes plastic flush tank, hanging iron steel bracket, bolts and nuts, as well as flexible flush hose , valve, porcelain paper holder, connection to pexogol pipe, connection to drainage and all related materials. Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include complete removal of the old toilets, replacement of any broken tiles, broken valves and then supplying new Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings as per specifications , drawing and as directed by supervision engineer.</p>	Complete Set	10		
14.3.14	<p>Supply &amp; Install Porcelain wall hung wash basin white or coloured engineer of size 50 x 45 cm of approved brand (Italy, Spanish made or equivalent), Price shall include chromium plated mixer with chromium plated handle mounted on wall. the price also includes connection to Pexogol pipe, liquide soap holder , and all fixation and hanging bracket. Price includes supplying and installing 40x60cm mirror., semi pedestal and all other required materials, including connection to drainage system.</p>	Complete Set	5		



<b>14.3.15</b>	Supply and Install White Vitreous Western type handicapped Toilet (Class A and approved by Palestine Standards Institution) Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings, accessories movable handle and fixed handle as shown on drawings and in Specifications. as per specifications , drawing and as directed by supervision Engineer.	Complete Set	1		
<b>14.3.16</b>	Supply and Install White Vitreous China handicapped Wash Basin(sliding type) (Class A and approved by Palestine Standards Institution), size (40 * 56) cm. Complete with all fittings, valves, waste pipes to nearest floor trap, taps or mixer (Class A and approved by Palestine Standards Institution), connection to water distribution, traps, and any other necessary parts as Specification and as directed by Eng. Price includes supplying and installing 40x60cm mirror. Gear tap.	Complete Set	1		
<b>14.3.17</b>	Supply and install wall/window type exhaust fans of approved manufacture (European type or equal) complete with self – act automatic shutter. Price includes galvanized ducts, grills, shutter and making necessary holes in walls or glass and fixing, and wiring cables all as per specifications, and approval of supervisor engineer. The fan shall have it is own electrical wiring inside walls or ceiling, one socket/key etc. The price shall include any excavation, painting, plastering etc. all as shown in drawings, specifications, and approval of supervisor engineer. Extract Fan, 100 CFM	No.	10		
<b>14.3.18</b>	Supply and Install of Precast Concrete Manholes with minimum 15cm wall thickness for sewage and storm water drainage In compliance with specifications and Drawings. Price shall include excavation to any depth according to slopes, B200 reinforced concrete for base, back filling, cement plaster, benching, 8 or 25Ton Cast Iron cover as indicated , drop if needed, and all necessary works. all as shown in drawings, specifications, and approval of supervisor engineer. a. Ø60cm, 25 ton C.I cover	NO.	2		
<b>14.3.19</b>	Supply and install floor cleanout 4" UPVC including stainless steel (sraled type) cover (15*15cm) complete with connection to drain pipes as located in drawings, specifications and approval of supervisor engineer	No.	2		
<b>14.4</b>	<b>Septic Tank (Conditional Item)</b>				

14.4.1	<p>Supply and cast and build Septic Tank and Interceptor as per the details in the drawings. Price to include:</p> <p>a. Excavation, in any type of soil, to the required depth and dimension shown in the drawings. Removal of extra and / or unsuitable soil.</p> <p>B. Back filling as per specifications and levelling of site around the structures to the levels shown in the drawings with approved imported selected fill.</p> <p>C. Base Coarse average 20cm thickness including watering, levelling and compacting of ground (sub-base) under base coarse to min 95% according to Field Density Test.</p> <p>D. Cast in Place concrete grade B-200 for blinding under foundations and walls.</p> <p>R. concrete Grade B-300, for foundations, beams, walls, suspended slabs and walls of pit compartment of interceptor and the like as per detailed drawings. Including any treatments needed.</p> <p>F. Reinforcement Steel Bars in shape, length and diameter detailed on the drawings and approved shop drawings and bar bending schedule.</p> <p>G. Three Coats of Plaster to walls and ceiling of Percolating Pit and Interceptor. Trowel smoothed plaster. Including waterproof additives.</p> <p>H. Heavy duty fixed cat ladders, of 3/4 inch galvanized steel pipes. Including rustproof paint and primer complete.</p> <p>I. Cast Iron Cover in number and size as shown in the drawings of heavy weight not less than 50 KG.</p> <p>J. All necessary fittings and works to complete works as per drawings and specifications.</p> <p>Note: Cement of all concrete works and plaster shall be of Sulfate resisting cement.</p>	L.S	1		
14.4.2	<p>Supply and install 8" UPVC pipes SN8 heavy duty, Local Made or equal and must be approved by Palestine Standard Institution, between manholes in with all required materials, sockets, fittings , rubber seals, elbow, etc. The price includes excavation ,backfilling of at least 15 cm sand above , below and around the pipes including back-filling of selected material above the sand, and disposal of surplus excavated materials. Excavation shall be to any depth, width, and in any type of soil or rock, connection for internal sewerage network to connect to existing or proposed new sewage network or the septic tank and insulation of septic tank wall after connection.</p>	L.M	10		
14.4.3	<p>Supply and Install of Precast Concrete Manholes with minimum 15cm wall thickness for sewage and storm water drainage In compliance with specifications and Drawings. Price shall include excavation to any depth according to slopes, B200 reinforced concrete for base, back filling, cement plaster, benching, 8 or 25Ton Cast Iron cover as indicated , drop if needed, and all necessary works. all as shown in drawings, specifications, and approval of supervisor engineer. a. Ø60cm, 8 ton C.I cover</p>	NO.	2		
Total Far'oun Preparatory Boys School (NIS)					

BILLS OF QUANTITIES					
CONSULTANT: Universal Group for Engineering and Consulting			DATE: March 2023		
Inshirah Al Daddu Preparatory co-ed School					
ITEM No.	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (ILS)	AMOUNT (ILS)
16.1	Preliminary Items				
16.1.1	Supply and installation of the project marble sign (110 cm x 70cm) that include colored project information. The Contractor shall do the design and fix the sign as per the supervision engineer instructions. The price shall include fixing the sign properly with all required drilling, jumboo bolts, rehabilitation of any damages occurred during fixation.	No.	1		
16.1.2	Demolishing works inside the WASH facilities (WCs) that intersects with the designed structure in accordance with the drawings. The price shall include demolishing but not limited to all inside partition walls, stalls, floors Tiles, Wall Tiles, electrical wires, lighting Points, Collectors, Sockets, Outlets, toilets, squatting toilets, windows, under tiles sewerage pipes/network, internal water supply network, etc. all as per drawings, and supervision engineer instructions. The price shall also includes demolish or removal of all obstacles, excavation, leveling etc. all as per drawings, and supervision engineer instructions. The price shall include remove all demolished materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
16.1.3	Remove carefully works inside the WASH facilities (WCs). The price shall include but not limited to remove carefully, main doors, WC doors, sinks, wash basins, lighting Points, Collectors, accessories, taps, etc. all as per drawings, and Engineer instructions. The Contractor shall transport all removed materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
16.1.4	<b>Door and windows Opening in Reinforced Concrete or Hollow Block</b> Allow for every expenses to make a door opening in RE concrete wall. The price shall also include all needed works to complete the works as per drawings, specifications and engineer instructions. The Contractor shall transport all removed materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
16.2	External Works				
16.2.1	<b>Drinking Fountain Works:</b> Rehabilitation of existing old Drinking Fountain outside drinking fountain. Price shall include supply and install and rehabilitation of the tiles, the sinks is 6.5 m long as per pictures, the work should be finished and completed to the highest standard. Rate include supply and install galvanized mesh fence with steel frame 2.5 diameter standard 0.5inch * 0.5 inch spacing for the mesh, hinges, metal angles, lock, reinforced concrete of 10cm thick with external plastering, sand and cement mortar, 20*20cm ceramic tiles, 2 inch pvc pipe, 10-cm cement blocks, 11 unit high quality (Class A and approved by Palestine Standards Institution) chrome plated taps of approved kind, rates also include p.v.c. Drainpipe outlet to the nearest manhole. And the accessories and equipment needed to finish the work in accordance with the details and the instructions of the supervision engineer. Price shall also include all necessary excavation, backfilling, reinforced concrete, reinstatement etc.	L.S	1		

16.2.2	<p><b>Awning Works</b> Supply and install steel awning at one location or several location as per the detail in the drawing and as per supervision engineer. The price shall also include all steel tubes (columns, horizontal, vertical etc.), steel corrugated sheets, drain gutters, steel bolts, excavation, backfilling, reinforced concrete foundations, reinstatement, 3 Inch galvanized Steel rain water, painting, the fixation, joints, angles and whatever necessary to complete the work in accordance with the drawings, specifications and to the approval of the supervision engineer. Price to include any required works including but not limited to, sealant works, fixing, fastening, welding etc. The Hight of the awning as per drawings or 3.5 meter if not mentioned. The final location or several locations of awning will be fixed during the shop drawing phase and as instructed by the supervision engineer, the Contractor shall not claim for additional cost or object.</p>	m2	25		
16.2.3	<p><b>Handicap Ramp Works:</b> Supply and Build handicap ramp made from Reinforced Concrete. The price shall include excavation, backfilling, reinstatement, demolish of all obstacles, steel reinforcement, reinforced concrete for ground beam and slab, hollow block wall, 5 cm natural stone tiles, compacted base Corse etc., in accordance with the drawings, details, specifications and to the instructions of the supervision engineer. Handrails of 50mm steel pipes and to include Fixing completely, oil paint three coats in addition to primer coat the hand rails are to be on both sides of the ramp. Price to also include chakered plate, and PVC rubber to the height 2m to the columns. The Contractor to submit shop drawings and details to be approved by the Engineers. Price includes cleaning, plastering and painting the wall adjacent to the newly installed ramp.</p>	L.S	1		

<b>16.3</b>	<b>Rehabilitation of existing WASH units (Ground Floor- WASH Facility No. 1)</b>				
<b>A. Civil Works</b>					
<b>16.3.1</b>	Supply and Build Concrete Block Walls, 'Grade 35' of any size blocks single or cavity. The measurements will be to one side only all done according to the dwg. specifications and Engineer instructions and approval. Hollow blocks 20 cm thick for the partition walls. Price shall also include Supply and Cast Reinforced Concrete Grade 'B250 With a minimum cement content of 300 Kg. per cubic meter. Price also to include shuttering, reinforcing 4Ø10 and stirrups 1Ø8@25cm, and all related works according to drawings and specifications and engineer instructions. For the beams 20cmX 20cm above Hollow blocks	M <sup>2</sup>	35.0		
<b>16.3.2</b>	Supply and Build Concrete Block Walls, 'Grade 35' of any size blocks single or cavity. The measurements will be to one side only all done according to the dwg. specifications and Engineer instructions and approval. Hollow blocks 10 cm thick for the partition walls. Price shall also include Supply and Cast Reinforced Concrete Grade 'B250 With a minimum cement content of 300 Kg. per cubic meter. Price also to include shuttering, reinforcing 4Ø10 and stirrups 1Ø8@25cm, and all related works according to drawings and specifications and engineer instructions. For the beams 20cmX 10cm above Hollow blocks	M <sup>2</sup>	46.0		
<b>16.3.3</b>	Supply and paint three coats polycide paint for ceilings including corridor ceilings of high quality (Approved by Palestine Standards Institution) and by the supervision engineer.	M <sup>2</sup>	50		
<b>16.3.4</b>	Supply and paint high quality emulsion paint, for top walls and internal drop beams (sides and bottom), on one priming coat and two finishing coats, using two coats of complete putty, as per satisfaction of the supervisor engineer.	M <sup>2</sup>	25		
<b>16.3.5</b>	Supply and Fix Factory-made Steel Doors as per drawings, specification. Price to include frame ( door) (as per details), fixing completely, ironmongery, cylinders, cylindrical locks handles (Approved by Palestine Standards Institution). 6 mm. glazing, gaskets, oil Paint in three coats in addition to two primer coats. A 40cm x 40cm sign made of Metal shall be fixed on the door. The sign should be colored and the icon and writing to be assigned by the supervision engineer, Dimensions: 1m *2.0m	No.	2		
<b>16.3.6</b>	Supply and Install Non-Slip Colored Ceramic Floor Tiles 0.6 cm Thickness. First choice and free from all defect grade "A". (Approved by Palestine Standards Institution). Price to include sand with cement filling (Grade B-100), pointing with white cement and cleaning on site, removal of the old tiles, leveling and all the necessary work to complete the job in accordance with the instructions of the supervision engineer.	M <sup>2</sup>	50		
<b>16.3.7</b>	Supply and Install White Glazed or colored Ceramic Wall Tiles 0.6 cm Thickness, First choice European type and free from all defects Grade "A". (Approved by Palestine Standards Institution). Price to include white round aluminum edges patching around services. Two coats of epoxy pointing ..All works shall be in accordance with drawings and specifications.	M <sup>2</sup>	155		
<b>16.3.8</b>	Supply, fix and operate non sliding Aluminum Windows extrusion Section 7700 or equal, with protective electrostatic applied polyester powder paint of 70-80 microns. In color of bronze. Price to include 6.38mm thick laminated glass (3+0.38+3mm) for double glass. float glazing and all other accessories and fittings to complete works as per drawings and specifications. Price shall include the steel protection from outside made of steel frame and steel wire mesh. Price shall also include painting, fixing etc.	M <sup>2</sup>	8.0		
<b>16.3.9</b>	Supply and install Local marble threshold for under Doors and under windows 3-4 cm thickness. All as per drawings, specifications and supervision engineer.	m2	7		

16.3.10	Supply and Fix Wooden Doors 4.5 cm Thick single or double sashes. With (Frame).(4.5*3.5) cm hardwood (Zan) edging and (3.5*9.5) cm soft wood stile. Edge strip banding of width 4.5 mm. Formica over veneer on both sides, color for frames and Architrave as directed by engineer. Door paneling to be soft wood 4.5*3.5 cm. each 4 cm., frames of galvanized steel sheet frame of 2mm thick for corridor doors ( as per drawings), width according to the wall thickness' and Allowance of 4 - 6 cm. thickness for plastering and tiling purposes, immersed in wood preservative before erection then embedded completely in sand - cement mortar and completely anchored as per specification. Architrave of Hardwood (Swedish)(4*1.2)cm, price to include ironmongery, kick plates of aluminum 20cm height from one side for main bath room doors, U shaped 10cm height from both sides at the bottom for internal doors kick plates of aluminum 20cm height for bath room doors, U shaped both sides, and at the bottom door stoppers, transparent fiber glass 6mm thick for both upper vision panel & for vision panel inside door leaf, gaskets cylindrical Lock ((Approved by Palestine Standards Institution), and painting in three coats of oil paint in addition to primer coat. Price includes also aluminum louvers of 50x60cm in the bottom for store doors. All as per Detailed Drawings, specification. Size as per drawings	No.	12		
16.3.11	Supply and Fix Wooden Doors 4.5 cm Thick single or double sashes. With Hardwood (Zan) Frame size (4.5*3.5) cm, and (3.5*9.5) cm soft wood stile. Edge strip banding of width 4.5 mm. Plywood veneer 5mm Thick on both sides. Door paneling to be soft wood 4.5*3.5 cm. each 4 cm. Frame of galvanized steel sheet frame of 2mm thick, width according to the wall thickness' and Allowance of 4 - 6 cm. thickness for plastering and tiling purposes, immersed in wood preservative before erection then embedded completely in sand - cement mortar and completely anchored as per specification. Price to include all the works including ironmongery, cylinders, locks, handles and paint.	No.	1		
<b>B. Electrical Works</b>					
	<p>Preamble: All Supplied Materials Should be Local Made (if available), Grade A and Free From Defects, Having Supervisor Certificate From Palestinian Standard Institution (PSI).</p> <p>Price to include submittal and obtaining approval of shop drawings, detailed and as-built drawings for all works as well as coordinating the same with the other services, activities and furniture.</p> <p>Price to include, also, submittal of catalogues and manufacturer instruction.</p> <p>Fixtures and appliances shall be measured in number. Supply and feeder Cables, cable conduits and cable trays shall not be measured but included in DB's prices</p> <p>Manholes, handholds and the like shall be measured in number. All Systems and devices shall be in lump sum including installation, testing and commissioning.</p> <p>Rates of fixtures and appliances shall include installation, wiring, switches and conduit works.</p> <p>All systems equipment (Class A and approved by Palestine Standards Institution)</p>				
16.3.12	<p><b>Lighting points</b></p> <p>Supply, Install and Connect Lighting Points including fire proof boxes fire proof Conduits, fire retardant (E90) 3*1.5 mm2 cables and 5*1.5mm2 for emergency kits, Light Switches, and all accessories as per drawings and specifications. Price to also include any necessary painting or tiling after connecting the points.</p>	SET No.	6		
16.3.13	<p><b>Lighting fixtures</b></p> <p>Supply, Install and Connect the following high frequency control gear Lighting Fixtures including P.F. correction capacitors, Lamps, installation for all lighting fixtures using galvanized iron chains to suspend the fixtures in the ceiling and all accessories as per drawings and specifications. Supply and install Surface mounted Type A or Type B as per drawings</p>	SET No.	6		
<b>C. Mechanical Works</b>					

	<p>Preamble. Supply networks pipes To Tanks, or from on roof feeding tanks to collectors shall be priced in Linear meter. Water tanks shall be measured in number. , Sanitary Fixtures shall be measured in number, price to include cold and hot water pipes supply and fittings to collectors, also to include drain supply , fittings connection, to manholes. Drains, Floor Traps, Clean outs and the like shall be measured in number.</p> <p>Internal sanitary sewers network shall be included in the rates of sanitary fixtures and appliances. and the sanitary fixtures includes the cost of poexgol pipes for basins, toilets, science lab basins, home economics basins, ..etc., price also includes the connection to drainage network of these fixtures in sanitary units and labs. Vents and vertical stacks shall measured in linear meter. Manhole, Galleys and the like shall be measured in number. External sewers pipes shall be measured in linear meter for each individual diameter and material. Rates of all fittings , fixtures , appliances and pipe laying shall include:- Supply of material, workmanship, installation, testing and commissioning. Rates to include also all peace's and fittings, including by passes , floats, cleaning outlets , automatic vents, vents and stack covers, valves and non return valves and the like needed to complete works as per specifications. Insulation and painting as called for in specifications. Excavation and cutting for all pipe laying works, bedding back filling and all works connected with pipe laying. All ties, sleeves, joints, tie bolts and rods, brackets and the like. Rates to include Workshops, Coordinated and as- built drawings as approved by the Engineer. , the contractor should submit best quality, approved two brands for each mechanical works items for approval, and should be approved by PSI, any cut in blocks for installations should be done using special cutting machine, (all mechanical materials as sanitary fixtures fixtures, devices should be Italy made, Germany, Spanish made or equivalent )</p>				
16.3.14	<p>Supply &amp; Install Porcelain W.C. bowl class "A" white or colored , (Italy, Spanish made or equivalent) with heavy duty seat and cover. Price includes plastic flush tank, hanging iron steel bracket, bolts and nuts, as well as flexible flush hose , valve, porcelain paper holder, connection to pexogol pipe, connection to drainage and all related materials. Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include complete removal of the old toilets, replacement of any broken tiles, broken valves and then supplying new Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings as per specifications , drawing and as directed by supervision engineer.</p>	Complete Set	12		
16.3.15	<p>Supply &amp; Install Porcelain wall hung wash basin white or colored engineer of size 50 x 45 cm of approved brand (Italy, Spanish made or equivalent), Price shall include chromium plated mixer with chromium plated handle mounted on wall. the price also includes connection to Pexogol pipe, liquide soap holder , and all fixation and hanging bracket. Price includes supplying and installing 40x60cm mirror., semi pedestal and all other required materials, including connection to drainage system.</p>	Complete Set	6		
16.3.16	<p>Supply and Install White Vitreous Western type handicapped Toilet (Class A and approved by Palestine Standards Institution) Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings, accessories movable handle and fixed handle as shown on drawings and in Specifications. as per specifications , drawing and as directed by supervision Engineer.</p>	Complete Set	1		
16.3.17	<p>Supply and Install White Vitreous China handicapped Wash Basin(sliding type) (Class A and approved by Palestine Standards Institution), size (40 * 56) cm. Complete with all fittings, valves, waste pipes to nearest floor trap, taps or mixer (Class A and approved by Palestine Standards Institution), connection to water distribution, traps, and any other necessary parts as Specification and as directed by Eng. Price includes supplying and installing 40x60cm mirror. Gear tap.</p>	Complete Set	1		

<b>16.3.18</b>	Supply and install wall/window type exhaust fans of approved manufacture (European type or equal) complete with self – act automatic shutter. Price includes galvanized ducts, grills, shutter and making necessary holes in walls or glass and fixing, and wiring cables all as per specifications, and approval of supervisor engineer. The fan shall have it is own electrical wiring inside walls or ceiling, one socket/key etc. The price shall include any excavation, painting, plastering etc. all as shown in drawings, specifications, and approval of supervisor engineer. Extract Fan, 100 CFM	No.	6		
<b>16.3.19</b>	Supply and install floor cleanout 4" UPVC including stainless steel (sraled type) cover (15*15cm) complete with connection to drain pipes as located in drawings, specifications and approval of supervisor engineer	No.	2		
<b>Total Inshirah Al Daddu Preparatory co-ed School (NIS)</b>					



BILLS OF QUANTITIES					
CONSULTANT: Universal Group for Engineering and Consulting			DATE: March 2023		
Al Amin Preparatory Boys School					
ITEM No.	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (ILS)	AMOUNT (ILS)
18.1	Preliminary Items				
18.1.1	Supply and installation of the project marble sign (110 cm x 70cm) that include colored project information. The Contractor shall do the design and fix the sign as per the supervision engineer instructions. The price shall include fixing the sign properly with all required drilling, jumbo bolts, rehabilitation of any damages occurred during fixation.	No.	1		
18.1.3	Allow for every cost and work to secure access to the site. The price shall include all needed works such (remove any obstacles or walls etc.) to allow access to the site for the Contractor machines and manpower etc.. The Contractor shall reinstate any damage he occurs during implementation and any structure he demolish to its original condtions.	L.S	1		
18.2	External Works				
18.2.1	<b>Drinking Fountain Works:</b> Remove the old Drinking Fountain Supply and install outside drinking fountain as shown on drawings, rate includes, sink 7.35X0.75m on block stands, the work should be finished and completed to the highest standard. Rate include excavation, B200 R. concrete (all steel reinforcement required), stone works, plastering, glazing tiles, local marble coping, planters and metal cover with all fittings, 14 unit high quality (Class A and approved by Palestine Standards Institution) chrome plated taps of approved kind, rates also include p.v.c. Drainpipe outlet to green area or as per drawings.	L.S	1		
18.2.2	<b>Awning Works</b> Supply and install steel awning at one location or several location as per the detail in the drawing and as per supervision engineer. The price shall also include all steel tubes (columns, horizontal, vertical etc.), steel corrugated sheets, drain gutters, steel bolts, excavation, backfilling, reinforced concrete foundations, reinstatement, 3 Inch galvanized Steel rain water, painting, the fixation, joints, angles and whatever necessary to complete the work in accordance with the drawings, specifications and to the approval of the supervision engineer. Price to include any required works including but not limited to, sealant works, fixing, fastening, welding etc. The Hight of the awning as per drawings or 3.5 meter if not mentioned. The final location or several locations of awning will be fixed during the shop drawing phase and as instructed by the supervision engineer, the Contractor shall not claim for additional cost or object.	m2	25		
18.3	Construction of a new WASH Facility				
A. Civil Works					
18.3.1	Site clearance of any type of stairs, reinforced concrete, trees, branches, rocks, etc. in order to start the work. While keeping the trees intact and safe in order to re-plant the trees in a suitable place in accordance with the supervision engineer and to his approval.	L.S	1.0		
18.3.2	Excavation for foundations and/or ground beam in any kind of soil or rock to the dimensions and levels shown in the drawings. (from N.G.L to bottom of hardcore layer) Price to include removal of extra and unsuitable soil to approved location. The price shall include reinstatement of any damage occurred during excavation. All as per drawings and specifications and supervision instructions.	M3	90.0		
18.3.3	Import and fill with selected Imported Approved Fill; to the required levels and where directed by the Engineer. Filling shall be on layers not to exceed 20cm. thick. Price to include leveling, watering and compacting to 98 % field density and all related works according to drawings and specifications and engineer instructions. The contractor to backfill using excavated soil if suitable or imported approved material.	M3	20.0		

<b>18.3.4</b>	Supply and Well Compact 40cm thick Base Coarse as per drawing compacted to min.98% of maximum dry density of modified Proctor, in layers 20cm thick. Price includes leveling, watering, leveling and compacting of ground (sub-base) under base coarse to min. 98% according to Field Density Test. Under foundation	M2	100.0		
<b>18.3.5</b>	Blinding Concrete grade 'B200' With a minimum cement content of 250 Kg. per cubic meter under footings and tie beams and where required, Thickness not less than 10cm thick, should be according to drawings. Price to include all required work according to specifications and drawings and engineer instruction.	M2	100.0		
<b>18.3.6</b>	Supply and Cast Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include shuttering, reinforcing, painting with two coats of hot bitumen (75/25) (for the buried parts) and all related works according to drawings and specifications and engineer instructions. For the foundations	M3	35.0		
<b>18.3.7</b>	Supply and Cast Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include shuttering, reinforcing, painting with two coats of hot bitumen (75/25) (for the buried parts) and all related works according to drawings and specifications and engineer instructions. For the ground beams	M3	0.0		
<b>18.3.8</b>	Supply and Cast Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include shuttering, reinforcing and all related works according to drawings and specifications and engineer instructions. For the columns	M3	5.0		
<b>18.3.9</b>	Supply and Cast 10 cm of Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include shuttering, reinforcing, painting with two coats of hot bitumen (75/25) (for the buried parts) and all related works according to drawings and specifications and engineer instructions. For the slab on grade	M2	100.0		
<b>18.3.10</b>	Supply and Cast 20 cm Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include shuttering, reinforcing, painting with two coats of hot bitumen (75/25) (for the buried parts) and all related works according to drawings and specifications and engineer instructions. For the solid slab including beams and drop beams	M2	105.0		
<b>18.3.11</b>	Supply & apply Special Concrete Screed to Roof, cast to falls not less than 40 mm at drain. Thickness in the lower point as shown on detailed drawings with smooth surface finish. Price also includes Plain Cast in Place Concrete Grade 'B-200' hunching and lining to all edges of roof screed and parapet, with slope 1: 1 to minimum height of 20 cm. All to comply with specifications and Engineers directions.  To be applied to the roof	m2	100.0		
<b>18.3.12</b>	Supply and Cast Reinforced Concrete Grade 'B 300'. With a minimum cement content of 300 Kg. per cubic meter. Price to include for cleaning and preparing surfaces and for applying two coats of cold liquid applied bituminous paint. For the ground beams.	m3	15.0		
<b>18.3.13</b>	Supply and Cast Reinforced Concrete Grade 'B 250'. With a minimum cement content of 300 Kg. per cubic meter For ground slab. Ten (10) cm. thick. Including surface leveling, finishing, polyethylene sheets 200 micron, construction joints and all related works.  For the Slab on Grade and surrounding areas	m2	140.0		

<b>18.3.14</b>	Supply and Cast blind Concrete Grade 'B 250'. With a minimum cement content of 300 Kg. per cubic meter under foundations and ground beams etc. Ten (10) cm. thick. Including surface leveling, finishing and all related works.	m2	110.0		
<b>18.3.15</b>	Supply and Build Concrete Block Walls, 'Grade 35' of any size blocks single or cavity . the measurements will be to one side only all done according to the dwg. specifications and Engineer instructions and approval. Hollow blocks 20 cm thick for the walls of the toilet. Price shall also include Supply and Cast Reinforced Concrete Grade 'B250 With a minimum cement content of 300 Kg. per cubic meter. Price also to include shuttering, reinforcing 4Ø10 and stirrups 1Ø8@25cm, and all related works according to drawings and specifications and engineer instructions. For the beams 20cmX 20cm above Hollow blocks	M <sup>2</sup>	135.0		
<b>18.3.16</b>	Supply and Build Concrete Block Walls, 'Grade 35' of any size blocks single or cavity. The measurements will be to one side only all done according to the dwg. specifications and Engineer instructions and approval. Hollow blocks 10 cm thick for the partition walls. Price shall also include Supply and Cast Reinforced Concrete Grade 'B250 With a minimum cement content of 300 Kg. per cubic meter. Price also to include shuttering, reinforcing 4Ø10 and stirrups 1Ø8@25cm, and all related works according to drawings and specifications and engineer instructions. For the beams 20cmX 10cm above Hollow blocks	M <sup>2</sup>	65.0		
<b>18.3.17</b>	supply and install two Coats of Cement and Sand Plaster over one slurry coat to walls and ceilings and where required for External plastering. price include Waterproofing additive (W 290) with the second and last face and painting with standard approved color Waterproofing supercyl for External walls of the existing structure at the entrance. Price to also include 2 coats of external painting (supercryle). To the toilets.	M <sup>2</sup>	385.0		
<b>18.3.18</b>	Supply and paint three coats polycide paint for ceilings including corridor ceilings of high quality (Approved by Palestine Standards Institution) and by the supervision engineer.	M <sup>2</sup>	100		
<b>18.3.19</b>	Supply and paint high quality emulsion paint, for top walls and internal drop beams (sides and bottom), on one priming coat and two finishing coats, using two coats of complete putty, as per satisfaction of the supervisor engineer.	M <sup>2</sup>	60		
<b>18.3.20</b>	Supply & paint three coats of external quality waterproofing supercyle paint for Corridors (walls) and parapet wall according to drawings and specifications.	M <sup>2</sup>	225		
<b>18.3.21</b>	Supply and Fix Factory-made Steel Doors as per drawings, specification. Price to include frame ( door) (as per details), fixing completely, ironmongery, cylinders, cylindrical locks handles (Approved by Palestine Standards Institution). 6 mm. glazing, gaskets, oil Paint in three coats in addition to two primer coats. A 40cm x 40cm sign made of Metal shall be fixed on the door. The sign should be colored and the icon and writing to be assigned by the supervision engineer, Dimensions: as per drawings	No.	3		
<b>18.3.22</b>	Supply and Install Non-Slip Colored Ceramic Floor Tiles 0.6 cm Thickness. First choice and free from all defect grade "A". (Approved by Palestine Standards Institution). Price to include sand with cement filling (Grade B-100), pointing with white cement and cleaning on site, removal of the old tiles, leveling and all the necessary work to complete the job in accordance with the instructions of the supervision engineer.	M <sup>2</sup>	100		

18.3.23	Supply and Install White Glazed or colored Ceramic Wall Tiles 0.6 cm Thickness, First choice European type and free from all defects Grade "A". (Approved by Palestine Standards Institution). Price to include white round aluminum edges patching around services. Two coats of epoxy pointing ..All works shall be in accordance with drawings and specifications.	M <sup>2</sup>	293		
18.3.24	Supply and Fix Wooden Doors 4.5 cm Thick single or double sashes. With (Frame).(4.5*3.5) cm hardwood (Zan) edging and (3.5*9.5) cm soft wood stile. Edge strip banding of width 4.5 mm. Formica over veneer on both sides, color for frames and Architrave as directed by engineer. Door paneling to be soft wood 4.5*3.5 cm. each 4 cm., frames of galvanized steel sheet frame of 2mm thick for corridor doors ( as per drawings), width according to the wall thickness' and Allowance of 4 - 6 cm. thickness for plastering and tiling purposes, immersed in wood preservative before erection then embedded completely in sand - cement mortar and completely anchored as per specification. Architrave of Hardwood (Swedish)(4*1.2)cm, price to include ironmongery, kick plates of aluminum 20cm height from one side for main bath room doors, U shaped 10cm height from both sides at the bottom for internal doors kick plates of aluminum 20cm height for bath room doors, U shaped both sides, and at the bottom door stoppers, transparent fiber glass 6mm thick for both upper vision panel & for vision panel inside door leaf, gaskets cylindrical Lock ((Approved by Palestine Standards Institution), and painting in three coats of oil paint in addition to primer coat. Price includes also aluminum louvers of 50x60cm in the bottom for store doors. All as per Detailed Drawings, specification. Size as per drawings	No.	16		
18.3.25	Supply, fix and operate non sliding Aluminum Windows extrusion Section 7700 or equal, with protective electrostatic applied polyester powder paint of 70-80 microns. In color of bronze. Price to include 6.38mm thick laminated glass (3+0.38+3mm) for double glass. float glazing and all other accessories and fittings to complete works as per drawings and specifications. Price shall include the steel protection from outside made of steel frame and steel wire mesh. Price shall also include painting, fixing etc.	M2	7		
18.3.26	Supply and apply app waterproofing membrane of bitumen rolls. (4 mm. of reinforced polyester sheets) covered with layer of white chipping, over roof slab and around parapets with overlaps of not less than 10 cm. Price to include primer coats of approval source according to specifications and engineer's instructions.	M <sup>2</sup>	100		
18.3.27	Supply and install Local marble threshold for under Doors and under windows 3-4 cm thickness	m2	14		
<b>B. Electrical Works</b>					
	<p>Preamble: All Supplied Materials Should be Local Made (if available), Grade A and Free From Defects, Having Supervisor Certificate From Palestinian Standard Institution (PSI).</p> <p>Price to include submittal and obtaining approval of shop drawings, detailed and as-built drawings for all works as well as coordinating the same with the other services, activities and furniture.</p> <p>Price to include, also, submittal of catalogues and manufacturer instruction.</p> <p>Fixtures and appliances shall be measured in number. Supply and feeder Cables, cable conduits and cable trays shall not be measured but included in DB's prices</p> <p>Manholes, handholds and the like shall be measured in number. All Systems and devices shall be in lump sum including installation, testing and commissioning.</p> <p>Rates of fixtures and appliances shall include installation, wiring, switches and conduit works.</p> <p>All systems equipment (Class A and approved by Palestine Standards Institution)</p>				

18.3.28	<p><b>Lighting points</b> Supply, Install and Connect Lighting Points including fire proof boxes fire proof Conduits, fire retardant (E90) 3*1.5 mm2 cables and 5*1.5mm2 for emergency kits, Light Switches, and all accessories as per drawings and specifications. Price to also include any necessary painting or tiling after connecting the points.</p>	SET No.	9		
18.3.29	<p><b>Lighting fixtures</b> Supply, Install and Connect the following high frequency control gear Lighting Fixtures including P.F. correction capacitors, Lamps, installation for all lighting fixtures using galvanized iron chains to suspend the fixtures in the ceiling and all accessories as per drawings and specifications. Supply and install Surface mounted Type A or Type B as per drawings</p>	SET No.	9		
18.3.30	<p><b>MDP and Main Electrical Connection</b> Supply, Install MDP and Connect 5x6mm2 XLPE cable include 1 Φ1.5" PVC conduit from MDB to the new Unit. Price shall also include excavation, any necessary painting, plastering or tiling after connecting the points.</p>	L.M	50		
<b>C. Mechanical Works</b>					
	<p>Preamble. Supply networks pipes To Tanks, or from on roof feeding tanks to collectors shall be priced in Linear meter. Water tanks shall be measured in number. , Sanitary Fixtures shall be measured in number, price to include cold and hot water pipes supply and fittings to collectors, also to include drain supply , fittings connection, to manholes. Drains, Floor Traps, Clean outs and the like shall be measured in number. Internal sanitary sewers network shall be included in the rates of sanitary fixtures and appliances. and the sanitary fixtures includes the cost of poexgol pipes for basins, toilets, science lab basins, home economics basins, ..etc., price also includes the connection to drainage network of these fixtures in sanitary units and labs. Vents and vertical stacks shall measured in linear meter. Manhole, Galleys and the like shall be measured in number. External sewers pipes shall be measured in linear meter for each individual diameter and material. Rates of all fittings , fixtures , appliances and pipe laying shall include:- Supply of material, workmanship, installation, testing and commissioning. Rates to include also all peace's and fittings, including by passes , floats, cleaning outlets , automatic vents, vents and stack covers, valves and non return valves and the like needed to complete works as per specifications. Insulation and painting as called for in specifications. Excavation and cutting for all pipe laying works, bedding back filling and all works connected with pipe laying. All ties, sleeves, joints, tie bolts and rods, brackets and the like. Rates to include Workshops, Coordinated and as- built drawings as approved by the Engineer. , the contractor should submit best quality, approved two brands for each mechanical works items for approval, and should be approved by PSI, any cut in blocks for installations should be done using special cutting machine, (all mechanical materials as sanitary fixtures fixtures, devices should be Italy made, Germany, Spanish made or equivalent )</p>				
18.3.31	<p>Supply &amp; Install Porcelain W.C. bowl class "A" white or colored , (Italy, Spanish made or equivalent) with heavy duty seat and cover. Price includes plastic flush tank, hanging iron steel bracket, bolts and nuts, as well as flexible flush hose , valve, porcelain paper holder, connection to pexogol pipe, connection to drainage and all related materials. Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include complete removal of the old toilets, replacement of any broken tiles, broken valves and then supplying new Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings as per specifications , drawing and as directed by supervision engineer.</p>	Complete Set	6		

<b>18.3.32</b>	Supply & Install Porcelain wall hung wash basin white or colored engineer of size 50 x 45 cm of approved brand (Italy, Spanish made or equivalent), Price shall include chromium plated mixer with chromium plated handle mounted on wall. the price also includes connection to Pexogol pipe, liquide soap holder , and all fixation and hanging bracket. Price includes supplying and installing 40x60cm mirror., semi pedestal and all other required materials, including connection to drainage system.	Complete Set	12		
<b>18.3.33</b>	Supply and install Arabic style and Supply & Install Porcelain W.C. bowl class "A" white or coloured , (Italy, Spanish made or equivalent) with heavy duty seat and cover. Price includes plastic flush tank, hanging iron steel bracket, bolts and nuts, as well as flexible flush hose , valve, porcelain paper holder, connection to pexogol pipe, connection to drainage and all related materials. Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include complete removal of the old toilets, replacement of any broken tiles, broken valves and then supplying new Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings as per specifications , drawing and as directed by supervision engineer.	Complete Set	10		
<b>18.3.34</b>	Supply and install 6" UPVC pipes SN8 heavy duty, at least (4.9mm) thick, Local Made or equal and must be approved by Palestine Standard Institution, between manholes in with all required materials, sockets, fittings , rubber seals, elbow, etc. The price includes excavation ,backfilling of at least 15 cm sand above , below and around the pipes including back-filling of selected material above the sand, and disposal of surplus excavated materials. Excavation shall be to any depth, width, and in any type of soil or rock, connection for internal sewerage network to connect to existing or proposed new sewage network or the septic tank and insulation of septic tank wall after connection.	L.M	22		
<b>18.3.35</b>	ditto as but 4" UPVC SN 4 pipes including vent caps with filters	L.M	50		
<b>18.3.36</b>	ditto as but 2" UPVC pipes	L.M	25		
<b>18.3.37</b>	Supply and install 4" galvanized vertical pipes heavy duty for rain water, Local Made or equal and must be approved by Palestine Standard Institution. Price includes digging for pipes, supports, hangers , and all rubber joints and sealants, and rainwater pipe end outlets from roof to ground.	L.M	6		
<b>18.3.38</b>	Heavy duty stainless steel 4" floor drain syphon trap with screw type screen and with closed covers for urinals , all of approved brand , complete with all required fittings and connections using reduced "T" for connecting sanitary fixtures, the traps in stairs to be with closed cover	No	12		
<b>18.3.39</b>	Supply and Install of Precast Concrete Manholes with minimum 15cm wall thickness for sewage and storm water drainage In compliance with specifications and Drawings. Price shall include excavation to any depth according to slopes, B200 reinforced concrete for base, back filling, cement plaster, benching, 8 or 25Ton Cast Iron cover as indicated , drop if needed, and all necessary works. all as shown in drawings, specifications, and approval of supervisor engineer. a. Ø60cm, 8 ton C.I cover	NO.	3		

<b>18.3.40</b>	Supply and install wall/window type exhaust fans of approved manufacture (European type or equal) complete with self – act automatic shutter. Price includes galvanized ducts, grills, shutter and making necessary holes in walls or glass and fixing, and wiring cables all as per specifications, and approval of supervisor engineer. The fan shall have it is own electrical wiring inside walls or ceiling, one socket/key etc. The price shall include any excavation, painting, plastering etc. all as shown in drawings, specifications, and approval of supervisor engineer. Extract Fan, 100 CFM	No.	7		
<b>18.3.41</b>	Supply and Install Polyethylene White, domestic Water Tank. Capacity 1500 lit. "With Quality approval Tag" Including well painted steel balustrade support , automatic copper float valve, isolating valves, drain valve, fittings, vents, screwed cover, piping and connections till main cold water piping and all accessories; all according to the engineers' instructions and approval, the mounting of the tanks should be according to details including special bracing and flexible connections, painted steel base and what is required to complete the work. The price shall also include Steel structure with 2 meter hight to carry the tank safely.	No.	5		
<b>18.3.42</b>	Supply and install floor cleanout 4" UPVC including stainless steel (sraled type) cover (15*15cm) complete with connection to drain pipes as located in drawings, specifications and approval of supervisor engineer	No.	4		
<b>18.3.43</b>	Supply, install and test Copper Collectors 3/4" dia., of approved brand. Price shall include all openings (eyes), and shall include for the required copper adaptors, hangers, supports, ties, air vents. Collectors shall be installed on walls, as shown on drawings. The work shall be completed as specified and according to the Engineer's instructions.	eye	48		
<b>Total Al Amin Preparatory Boys School (NIS)</b>					

BILLS OF QUANTITIES					
CONSULTANT: Universal Group for Engineering and Consulting			DATE: March 2023		
Al Mu'tasem Preparatory Boys School					
ITEM No.	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (ILS)	AMOUNT (ILS)
19.1	Preliminary Items				
19.1.1	Supply and installation of the project marble sign (110 cm x 70cm) that include coloured project information. The Contractor shall do the design and fix the sign as per the supervision engineer instructions. The price shall include fixing the sign properly with all required drilling, jumbo bolts, rehabilitation of any damages occurred during fixation.	No.	1		
19.1.2	Demolishing works inside the WASH facilities (WCs) that intersects with the designed structure in accordance with the drawings. The price shall include remove all demolished materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
19.1.3	Remove carefully works inside the WASH facilities (WCs). The price shall include but not limited to remove carefully, main doors, WC doors, sinks, wash basins, lighting Points, Collectors, accessories, taps, etc. all as per drawings, and Engineer instructions. The Contractor shall transport all removed materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
19.1.4	Demolish works for existing wall to extended the are of WASH unit from the next existing room all as per drawings, and Engineer instructions. The Contractor shall transport all removed materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
19.1.5	<b>Reinforced Concrete Cross-Walk</b> Supply and Cast 25 cm of Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include reinforcing 1Ø14@20cm both way shuttering, reinforcing, and all related works according to drawings and specifications and engineer instructions. Price shall also include curb stone to be installed on both side along the cross walk.	M2	8		
19.2	External Works				
19.2.1	<b>Drinking Fountain Works:</b> Remove the old Drinking Fountain and Supply and install outside drinking fountain as shown on drawings, rate includes, sink 5.35X0.75m on block stands, the work should be finished and completed to the highest standard. Rate include excavation, B200 R. concrete (all steel reinforcement required), stone works, plastering, glazing tiles, local marble coping, planters and metal cover with all fittings, 10 unit high quality (Class A and approved by Palestine Standards Institution) chrome plated taps of approved kind, rates also include p.v.c. Drainpipe outlet to green area or as per drawings.	L.S	1		
19.2.2	<b>Awning Works</b> Supply and install steel awning at one location or several location as per the detail in the drawing and as per supervision engineer. The price shall also include all steel tubes (columns, horizontal, vertical etc.), steel corrugated sheets, drain gutters, steel bolts, excavation, backfilling, reinforced concrete foundations, reinstatement, 3 Inch galvanized Steel rain water, painting, the fixation, joints, angles and whatever necessary to complete the work in accordance with the drawings, specifications and to the approval of the supervision engineer. Price to include any required works including but not limited to, sealant works, fixing, fastening, welding etc. The Hight of the awning as per drawings or 3.5 meter if not mentioned. The final location or several locations of awning will be fixed during the shop drawing phase and as instructed by the supervision engineer, the Contractor shall not claim for additional cost or object.	m2	20		
19.3	Rehabilitation and extension of Existing WASH unit				
A. Civil Works					



<b>19.3.1</b>	Site clearance of any type of stairs, reinforced concrete, trees, branches, rocks, etc. in order to start the work. While keeping the trees intact and safe in order to re-plant the trees in a suitable place in accordance with the supervision engineer and to his approval.	L.S	1.0		
<b>19.3.2</b>	Excavation for foundations and/or ground beam in any kind of soil or rock to the dimensions and levels shown in the drawings. (from N.G.L to bottom of hardcore layer) Price to include removal of extra and unsuitable soil to approved location. The price shall include reinstatement of any damage occurred during excavation. All as per drawings and specifications and supervision instructions.	M3	14.0		
<b>19.3.3</b>	Import and fill with selected Imported Approved Fill; to the required levels and where directed by the Engineer. Filling shall be on layers not to exceed 20cm. thick. Price to include levelling, watering and compacting to 98 % field density and all related works according to drawings and specifications and engineer instructions. The contractor to backfill using excavated soil if suitable or imported approved material.	M3	8.0		
<b>19.3.4</b>	Supply and Well Compact 40cm thick Base Coarse as per drawing compacted to min.98% of maximum dry density of modified Proctor, in layers 20cm thick. Price includes levelling, watering, levelling and compacting of ground (sub-base) under base coarse to min. 98% according to Field Density Test. Under foundation	M2	17.0		
<b>19.3.5</b>	Blinding Concrete grade 'B200' With a minimum cement content of 250 Kg. per cubic meter under footings and tie beams and where required, Thickness not less than 10cm thick, should be according to drawings. Price to include all required work according to specifications and drawings and engineer instruction.	M2	17.0		
<b>19.3.6</b>	Supply and Cast Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include shuttering, reinforcing , painting with two coats of hot bitumen (75/25) (for the buried parts) and all related works according to drawings and specifications and engineer instructions. For the foundations	M3	6.0		
<b>19.3.7</b>	Supply and Cast Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include shuttering, reinforcing and all related works according to drawings and specifications and engineer instructions. For the columns	M3	1.0		
<b>19.3.8</b>	Supply and Cast 10 cm of Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include shuttering, reinforcing , painting with two coats of hot bitumen (75/25) (for the buried parts) and all related works according to drawings and specifications and engineer instructions. For the slab on grade	M2	17.0		
<b>19.3.9</b>	Supply and Cast 20 cm Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include shuttering, reinforcing , painting with two coats of hot bitumen (75/25) (for the buried parts) and all related works according to drawings and specifications and engineer instructions. For the solid slab including beams and drop beams	M2	18.0		
<b>19.3.10</b>	Supply & apply Special Concrete Screed to Roof, cast to falls not less than 40 mm at drain. Thickness in the lower point as shown on detailed drawings with smooth surface finish. Price also includes Plain Cast in Place Concrete Grade 'B-200' hunching and lining to all edges of roof screed and parapet, with slope 1: 1 to minimum height of 20 cm. All to comply with specifications and Engineers directions.  To be applied to the roof	m2	18.0		

<b>19.3.11</b>	Supply and Cast Reinforced Concrete Grade 'B 300'. With a minimum cement content of 300 Kg. per cubic meter. Price to include for cleaning and preparing surfaces and for applying two coats of cold liquid applied bituminous paint. For the ground beams.	m3	3.0		
<b>19.3.12</b>	Supply and Cast Reinforced Concrete Grade 'B 250'. With a minimum cement content of 300 Kg. per cubic meter For ground slab. Ten (10) cm. thick. Including surface leveling, finishing, polyethylene sheets 200 micron, construction joints and all related works.  For the Slab on Grade and surrounding areas	m2	25.0		
<b>19.3.13</b>	Supply and Cast blind Concrete Grade 'B 250'. With a minimum cement content of 300 Kg. per cubic meter under foundations and ground beams etc. Ten (10) cm. thick. Including surface leveling, finishing and all related works.	m2	25.0		
<b>19.3.14</b>	Supply and Build Concrete Block Walls, 'Grade 35' of any size blocks single or cavity . the measurements will be to one side only all done according to the dwg. specifications and Engineer instructions and approval. Hollow blocks 20 cm thick for the walls of the toilet. Price shall also include Supply and Cast Reinforced Concrete Grade 'B250 With a minimum cement content of 300 Kg. per cubic meter. Price also to include shuttering, reinforcing 4Ø10 and stirrups 1Ø8@25cm, and all related works according to drawings and specifications and engineer instructions. For the beams 20cmX 20cm above Hollow blocks	M <sup>2</sup>	35.0		
<b>19.3.15</b>	Supply and Build Concrete Block Walls, 'Grade 35' of any size blocks single or cavity. The measurements will be to one side only all done according to the dwg. specifications and Engineer instructions and approval. Hollow blocks 10 cm thick for the partition walls. Price shall also include Supply and Cast Reinforced Concrete Grade 'B250 With a minimum cement content of 300 Kg. per cubic meter. Price also to include shuttering, reinforcing 4Ø10 and stirrups 1Ø8@25cm ,and all related works according to drawings and specifications and engineer instructions. For the beams 20cmX 10cm above Hollow blocks	M <sup>2</sup>	5.0		
<b>19.3.16</b>	supply and install two Coats of Cement and Sand Plaster over one slurry coat to walls and ceilings and where required for External plastering. price include Waterproofing additive (W 290) with the second and last face and painting with standard approved colour Waterproofing supercyl for External walls of the existing structure at the entrance. Price to also include 2 coats of external painting (supercryle). To the toilets.	M <sup>2</sup>	55.0		
<b>19.3.17</b>	Supply and paint three coats polycide paint for ceilings including corridor ceilings of high quality (Approved by Palestine Standards Institution) and by the supervision engineer.	M <sup>2</sup>	70		
<b>19.3.18</b>	Supply and paint high quality emulsion paint, for top walls and internal drop beams (sides and bottom), on one priming coat and two finishing coats, using two coats of complete putty, as per satisfaction of the supervisor engineer.	M <sup>2</sup>	38		
<b>19.3.19</b>	Supply & paint three coats of external quality waterproofing supercyle paint for Corridors (walls) and parapet wall according to drawings and specifications.	M <sup>2</sup>	32		

19.3.20	Supply and Fix Factory-made Steel Doors as per drawings, specification. Price to include frame (door) (as per details), fixing completely, ironmongery, cylinders, cylindrical locks handles (Approved by Palestine Standards Institution). 6 mm. glazing, gaskets, oil Paint in three coats in addition to two primer coats. A 40cm x 40cm sign made of Metal shall be fixed on the door. The sign should be coloured and the icon and writing to be assigned by the supervision engineer, Dimensions: as per drawings	No.	3		
19.3.21	Supply and Install for new unit Non-Slip Coloured Ceramic Floor Tiles 0.6 cm Thickness. First choice and free from all defect grade "A". (Approved by Palestine Standards Institution). Price to include sand with cement filling (Grade B-100), pointing with white cement and cleaning on site, removal of the old tiles, levelling and all the necessary work to complete the job in accordance with the instructions of the supervision engineer.	M <sup>2</sup>	18		
19.3.22	Supply and Install for old unit Non-Slip Coloured Ceramic Floor Tiles 0.6 cm Thickness. First choice and free from all defect grade "A". (Approved by Palestine Standards Institution). Price to include sand with cement filling (Grade B-100), pointing with white cement and cleaning on site, removal of the old tiles, levelling and all the necessary work to complete the job in accordance with the instructions of the supervision engineer.	M <sup>2</sup>	52		
19.3.23	Supply and Install for new unit White Glazed or coloured Ceramic Wall Tiles 0.6 cm Thickness, First choice European type and free from all defects Grade "A". (Approved by Palestine Standards Institution). Price to include white round aluminium edges patching around services. Two coats of epoxy pointing ..All works shall be in accordance with drawings and specifications.	M <sup>2</sup>	55		
19.3.24	Supply and Install for old unit White Glazed or coloured Ceramic Wall Tiles 0.6 cm Thickness, First choice European type and free from all defects Grade "A". (Approved by Palestine Standards Institution). Price to include white round aluminium edges patching around services. Two coats of epoxy pointing ..All works shall be in accordance with drawings and specifications.	M <sup>2</sup>	220		
19.3.25	Supply and Fix Wooden Doors 4.5 cm Thick single or double sashes. With (Frame).(4.5*3.5) cm hardwood (Zan) edging and (3.5*9.5) cm soft wood stile. Edge strip banding of width 4.5 mm. Formica over veneer on both sides, colour for frames and Architrave as directed by engineer. Door paneling to be soft wood 4.5*3.5 cm. each 4 cm., frames of galvanized steel sheet frame of 2mm thick for corridor doors ( as per drawings), width according to the wall thickness' and Allowance of 4 - 6 cm. thickness for plastering and tiling purposes, immersed in wood preservative before erection then embedded completely in sand - cement mortar and completely anchored as per specification. Architrave of Hardwood (Swedish)(4*1.2)cm, price to include ironmongery, kick plates of aluminium 20cm height from one side for main bath room doors, U shaped 10cm height from both sides at the bottom for internal doors kick plates of aluminium 20cm height for bath room doors, U shaped both sides, and at the bottom door stoppers, transparent fiber glass 6mm thick for both upper vision panel & for vision panel inside door leaf, gaskets cylindrical Lock ((Approved by Palestine Standards Institution), and painting in three coats of oil paint in addition to primer coat. Price includes also aluminium louvers of 50x60cm in the bottom for store doors. All as per Detailed Drawings, specification. Size as per drawings	No.	2		
19.3.26	Supply, fix and operate non sliding Aluminium Windows extrusion Section 7700 or equal, with protective electrostatic applied polyester powder paint of 70-80 microns. Price to include 6.38mm thick laminated glass (3+0.38+3mm) for double glass. float glazing and all other accessories and fittings to complete works as per drawings and specifications. Price shall include the steel protection from outside made of steel frame and steel wire mesh. Price shall also include painting, fixing etc.	M2	2		

19.3.27	Supply and apply app waterproofing membrane of bitumen rolls. (4 mm. of reinforced polyester sheets) covered with layer of white chipping, over roof slab and around parapets with overlaps of not less than 10 cm. Price to include primer coats of approval source according to specifications and engineer's instructions.	M <sup>2</sup>	17		
19.3.28	Supply and install Local marble threshold for under Doors and under windows 3-4 cm thickness	m2	12		
<b>B. Electrical Works</b>					
	<p>Preamble: All Supplied Materials Should be Local Made (if available), Grade A and Free From Defects, Having Supervisor Certificate From Palestinian Standard Institution (PSI).</p> <p>Price to include submittal and obtaining approval of shop drawings, detailed and as-built drawings for all works as well as coordinating the same with the other services, activities and furniture.</p> <p>Price to include, also, submittal of catalogues and manufacturer instruction. Fixtures and appliances shall be measured in number. Supply and feeder Cables, cable conduits and cable trays shall not be measured but included in DB's prices</p> <p>Manholes, handholds and the like shall be measured in number. All Systems and devices shall be in lump sum including installation, testing and commissioning.</p> <p>Rates of fixtures and appliances shall include installation, wiring, switches and conduit works.</p> <p>All systems equipment (Class A and approved by Palestine Standards Institution)</p>				
19.3.30	<p><b>Lighting points</b></p> <p>Supply, Install and Connect Lighting Points including fire proof boxes fire proof Conduits, fire retardant (E90) 3*1.5 mm2 cables and 5*1.5mm2 for emergency kits, Light Switches, and all accessories as per drawings and specifications. Price to also include any necessary painting or tiling after connecting the points.</p>	SET No.	9		
19.3.31	<p><b>Lighting fixtures</b></p> <p>Supply, Install and Connect the following high frequency control gear Lighting Fixtures including P.F. correction capacitors, Lamps, installation for all lighting fixtures using galvanized iron chains to suspend the fixtures in the ceiling and all accessories as per drawings and specifications. Supply and install Surface mounted Type A or Type B as per drawings</p>	SET No.	9		
19.3.32	<p><b>Main Electrical Connection</b></p> <p>Supply, Install and Connect 5x6mm2 XLPE cable include 1Φ1.5" PVC conduit from MDB to the new Unit. Price shall also include excavation, any necessary painting, plastering or tiling after connecting the points.</p>	L.M	12		
<b>C. Mechanical Works</b>					

	<p>Preamble. Supply networks pipes To Tanks, or from on roof feeding tanks to collectors shall be priced in Linear meter. Water tanks shall be measured in number. , Sanitary Fixtures shall be measured in number, price to include cold and hot water pipes supply and fittings to collectors, also to include drain supply , fittings connection, to manholes. Drains, Floor Traps, Clean outs and the like shall be measured in number.</p> <p>Internal sanitary sewers network shall be included in the rates of sanitary fixtures and appliances. and the sanitary fixtures includes the cost of poexgol pipes for basins, toilets, science lab basins, home economics basins, ..etc., price also includes the connection to drainage network of these fixtures in sanitary units and labs. Vents and vertical stacks shall measured in linear meter. Manhole, Galleys and the like shall be measured in number. External sewers pipes shall be measured in linear meter for each individual diameter and material. Rates of all fittings , fixtures , appliances and pipe laying shall include:- Supply of material, workmanship, installation, testing and commissioning. Rates to include also all peace's and fittings, including by passes , floats, cleaning outlets , automatic vents, vents and stack covers, valves and non return valves and the like needed to complete works as per specifications. Insulation and painting as called for in specifications. Excavation and cutting for all pipe laying works, bedding back filling and all works connected with pipe laying. All ties, sleeves, joints, tie bolts and rods, brackets and the like. Rates to include Workshops, Coordinated and as- built drawings as approved by the Engineer. , the contractor should submit best quality, approved two brands for each mechanical works items for approval, and should be approved by PSI, any cut in blocks for installations should be done using special cutting machine, (all mechanical materials as sanitary fixtures fixtures, devices should be Italy made, Germany, Spanish made or equivalent )</p>				
19.3.33	<p>Supply &amp; Install Porcelain W.C. bowl class "A" white or coloured , (Italy, Spanish made or equivalent) with heavy duty seat and cover. Price includes plastic flush tank, hanging iron steel bracket, bolts and nuts, as well as flexible flush hose , valve, porcelain paper holder, connection to pexogol pipe, connection to drainage and all related materials. Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include complete removal of the old toilets, replacement of any broken tiles, broken valves and then supplying new Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings as per specifications , drawing and as directed by supervision engineer.</p>	Complete Set	6		
19.3.34	<p>Supply &amp; Install Porcelain wall hung wash basin white or coloured engineer of size 50 x 45 cm of approved brand (Italy, Spanish made or equivalent), Price shall include chromium plated mixer with chromium plated handle mounted on wall. the price also includes connection to Pexogol pipe, liquide soap holder , and all fixation and hanging bracket. Price includes supplying and installing 40x60cm mirror., semi pedestal and all other required materials, including connection to drainage system.</p>	Complete Set	7		
19.3.35	<p>Supply and Install White Vitreous Western type handicapped Toilet (Class A and approved by Palestine Standards Institution) Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings, accessories movable handle and fixed handle as shown on drawings and in Specifications. as per specifications , drawing and as directed by supervision Engineer.</p>	Complete Set	1		
19.3.36	<p>Supply and Install White Vitreous China handicapped Wash Basin(sliding type) (Class A and approved by Palestine Standards Institution), size (40 * 56) cm. Complete with all fittings, valves, waste pipes to nearest floor trap, taps or mixer (Class A and approved by Palestine Standards Institution), connection to water distribution, traps, and any other necessary parts as Specification and as directed by Eng. Price includes supplying and installing 40x60cm mirror. Gear tap.</p>	Complete Set	1		

<b>19.3.37</b>	Supply and install Arabic style and Supply & Install Porcelain W.C. bowl class "A" white or coloured , (Italy, Spanish made or equivalent) with heavy duty seat and cover. Price includes plastic flush tank, hanging iron steel bracket, bolts and nuts, as well as flexible flush hose , valve, porcelain paper holder, connection to pexogol pipe, connection to drainage and all related materials. Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include complete removal of the old toilets, replacement of any broken tiles, broken valves and then supplying new Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings as per specifications , drawing and as directed by supervision engineer.	Complete Set	10		
<b>19.3.38</b>	Supply and install 1" diameter pipe schedule 40 galvanized steel pipes with all necessary fittings such as elbows Tees, unions, air vents, supports, hangers, shields, saddles, plastic tape etc. All piping hung on shafts, or in riser, and in sanitary block are measured in meter run. All pipes imbedded in walls or in site external shall be coated with layers of extruded polyethylene. All pipe joints imbedded in walls shall be coated with thick asphalt layer, all hot water pipes shall be insulated with polyethylene and to be cladded on roof. Price to also include any necessary painting or tiling after connecting the points. The works shall include bring the water from the nearest source.	L.M	25		
<b>19.3.39</b>	Supply and install 6" UPVC pipes SN8 heavy duty, at least (4.9mm) thick, Local Made or equal and must be approved by Palestine Standard Institution, between manholes in with all required materials, sockets, fittings , rubber seals, elbow, etc. The price includes excavation ,backfilling of at least 15 cm sand above , below and around the pipes including back-filling of selected material above the sand, and disposal of surplus excavated materials. Excavation shall be to any depth, width, and in any type of soil or rock, connection for internal sewerage network to connect to existing or proposed new sewage network or the septic tank and insulation of septic tank wall after connection.	L.M	18		
<b>19.3.40</b>	ditto as 1.3.28 but 4" UPVC SN 4 pipes including vent caps with filters	L.M	12		
<b>19.3.41</b>	ditto as 1.3.28 but 2" UPVC pipes	L.M	8		
<b>19.3.42</b>	Supply and install 4" galvanized vertical pipes heavy duty for rain water, Local Made or equal and must be approved by Palestine Standard Institution. Price includes digging for pipes, supports, hangers , and all rubber joints and sealants, and rainwater pipe end outlets from roof to ground.	L.M	6		
<b>19.3.43</b>	Heavy duty stainless steel 4" floor drain syphon trap with screw type screen and with closed covers for urinals , all of approved brand , complete with all required fittings and connections using reduced "T" for connecting sanitary fixtures, the traps in stairs to be with closed cover	No	10		
<b>19.3.44</b>	Supply and Install of Precast Concrete Manholes with minimum 15cm wall thickness for sewage and storm water drainage In compliance with specifications and Drawings. Price shall include excavation to any depth according to slopes, B200 reinforced concrete for base, back filling, cement plaster, benching, 8 or 25Ton Cast Iron cover as indicated , drop if needed, and all necessary works. all as shown in drawings, specifications, and approval of supervisor engineer. a. Ø60cm, 8 ton C.I cover	NO.	3		

<b>19.3.45</b>	Supply and install wall/window type exhaust fans of approved manufacture (European type or equal) complete with self – act automatic shutter. Price includes galvanized ducts, grills, shutter and making necessary holes in walls or glass and fixing, and wiring cables all as per specifications, and approval of supervisor engineer. The fan shall have it is own electrical wiring inside walls or ceiling, one socket/key etc. The price shall include any excavation, painting, plastering etc. all as shown in drawings, specifications, and approval of supervisor engineer. Extract Fan, 100 CFM	No.	14		
<b>19.3.46</b>	Supply and Install Polyethylene White, domestic Water Tank. Capacity 1500 lit. "With Quality approval Tag" Including well painted steel balustrade support , automatic copper float valve, isolating valves, drain valve, fittings, vents, screwed cover, piping and connections till main cold water piping and all accessories; all according to the engineers' instructions and approval, the mounting of the tanks should be according to details including special bracing and flexible connections, painted steel base and what is required to complete the work. The price shall also include Steel structure with 2 meter hight to carry the tank safely.	No.	2		
<b>19.3.47</b>	Supply and install floor cleanout 4" UPVC including stainless steel (sraled type) cover (15*15cm) complete with connection to drain pipes as located in drawings, specifications and approval of supervisor engineer	No.	4		
<b>19.3.48</b>	Supply, install and test Copper Collectors 3/4" dia., of approved brand. Price shall include all openings (eyes), and shall include for the required copper adaptors, hangers, supports, ties, air vents. Collectors shall be installed on walls, as shown on drawings. The work shall be completed as specified and according to the Engineer's instructions.	eye	43		
<b>Total Al Mu'tasem Preparatory Boys School</b>					

BILLS OF QUANTITIES					
CONSULTANT: Universal Group for Engineering and Consulting			DATE: March 2023		
Al Nithamiye Preparatory Girls School					
ITEM No.	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (ILS)	AMOUNT (ILS)
20.1	Preliminary Items				
20.1.1	Supply and installation of the project marble sign (110 cm x 70cm) that include coloured project information. The Contractor shall do the design and fix the sign as per the supervision engineer instructions. The price shall include fixing the sign properly with all required drilling, jumbo bolts, rehabilitation of any damages occurred during fixation.	No.	1		
20.1.2	Allow for every cost and work to secure access to the site. The price shall include all needed works such (remove any obstacles or walls etc.) to allow access to the site for the Contractor machines and manpower etc. The Contractor shall reinstate any damage he occurs during implementation and any structure he demolish to its original conditions.	L.S	1		
20.2	External Works				
20.2.1	<b>Awning Works</b> Supply and install steel awning at one location or several location as per the detail in the drawing and as per supervision engineer. The price shall also include all steel tubes (columns, horizontal, vertical etc.), steel corrugated sheets, drain gutters, steel bolts, excavation, backfilling, reinforced concrete foundations, reinstatement, 3 Inch galvanized Steel rain water, painting, the fixation, joints, angles and whatever necessary to complete the work in accordance with the drawings, specifications and to the approval of the supervision engineer. Price to include any required works including but not limited to, sealant works, fixing, fastening, welding etc. The Hight of the awning as per drawings or 3.5 meter if not mentioned. The final location or several locations of awning will be fixed during the shop drawing phase and as instructed by the supervision engineer, the Contractor shall not claim for additional cost or object.	m2	25		
20.3	Construction of a new WASH Facility				
A. Civil Works					
20.3.1	Site clearance of any type of stairs, reinforced concrete, trees, branches, rocks, etc. in order to start the work. While keeping the trees intact and safe in order to re-plant the trees in a suitable place in accordance with the supervision engineer and to his approval.	L.S	1.0		
20.3.2	Excavation for foundations and/or ground beam in any kind of soil or rock to the dimensions and levels shown in the drawings. (from N.G.L to bottom of hardcore layer) Price to include removal of extra and unsuitable soil to approved location. The price shall include reinstatement of any damage occurred during excavation. All as per drawings and specifications and supervision instructions.	M3	40.0		
20.3.3	Import and fill with selected Imported Approved Fill; to the required levels and where directed by the Engineer. Filling shall be on layers not to exceed 20cm. thick. Price to include levelling, watering and compacting to 98 % field density and all related works according to drawings and specifications and engineer instructions. The contractor to backfill using excavated soil if suitable or imported approved material.	M3	15.0		
20.3.4	Supply and Well Compact 40cm thick Base Coarse as per drawing compacted to min.98% of maximum dry density of modified Proctor, in layers 20cm thick. Price includes levelling, watering, levelling and compacting of ground (sub-base) under base coarse to min. 98% according to Field Density Test. Under foundation	M2	40.0		



<b>20.3.5</b>	Blinding Concrete grade 'B200' With a minimum cement content of 250 Kg. per cubic meter under footings and tie beams and where required, Thickness not less than 10cm thick, should be according to drawings. Price to include all required work according to specifications and drawings and engineer instruction.	M2	40.0		
<b>20.3.6</b>	Supply and Cast Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include shuttering, reinforcing, painting with two coats of hot bitumen (75/25) (for the buried parts) and all related works according to drawings and specifications and engineer instructions. For the foundations	M3	17.0		
<b>20.3.7</b>	Supply and Cast Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include shuttering, reinforcing, painting with two coats of hot bitumen (75/25) (for the buried parts) and all related works according to drawings and specifications and engineer instructions. For the ground beams	M3	7.0		
<b>20.3.8</b>	Supply and Cast Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include shuttering, reinforcing and all related works according to drawings and specifications and engineer instructions. For the columns	M3	2.5		
<b>20.3.9</b>	Supply and Cast 10 cm of Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include shuttering, reinforcing, painting with two coats of hot bitumen (75/25) (for the buried parts) and all related works according to drawings and specifications and engineer instructions. For the slab on grade	M2	45.0		
<b>20.3.10</b>	Supply and Cast 20 cm Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include shuttering, reinforcing, painting with two coats of hot bitumen (75/25) (for the buried parts) and all related works according to drawings and specifications and engineer instructions. For the solid slab including beams and drop beams	M2	48.0		
<b>20.3.11</b>	Supply and Cast Reinforced Concrete Grade 'B 250'. With a minimum cement content of 300 Kg. per cubic meter For ground slab. Ten (10) cm. thick. Including surface leveling, finishing, polyethylene sheets 200 micron, construction joints and all related works.  For the Slab on Grade and surrounding areas	m2	63.0		
<b>20.3.12</b>	Supply and Cast blind Concrete Grade 'B 250'. With a minimum cement content of 300 Kg. per cubic meter under foundations and ground beams etc. Ten (10) cm. thick. Including surface leveling, finishing and all related works.	m2	63.0		
<b>20.3.13</b>	Supply & apply Special Concrete Screed to Roof, cast to falls not less than 40 mm at drain. Thickness in the lower point as shown on detailed drawings with smooth surface finish. Price also includes Plain Cast in Place Concrete Grade 'B-200' hunching and lining to all edges of roof screed and parapet, with slope 1: 1 to minimum height of 20 cm. All to comply with specifications and Engineers directions.  To be applied to the roof	m2	50.0		

20.3.14	Supply and Build Concrete Block Walls, 'Grade 35' of any size blocks single or cavity . the measurements will be to one side only all done according to the dwg. specifications and Engineer instructions and approval. Hollow blocks 20 cm thick for the walls of the toilet. Price shall also include Supply and Cast Reinforced Concrete Grade 'B250 With a minimum cement content of 300 Kg. per cubic meter. Price also to include shuttering, reinforcing 4Ø10 and stirrups 1Ø8@25cm, and all related works according to drawings and specifications and engineer instructions. For the beams 20cmX 20cm above Hollow blocks	M <sup>2</sup>	85.0		
20.3.15	Supply and Build Concrete Block Walls, 'Grade 35' of any size blocks single or cavity. The measurements will be to one side only all done according to the dwg. specifications and Engineer instructions and approval. Hollow blocks 10 cm thick for the partition walls. Price shall also include Supply and Cast Reinforced Concrete Grade 'B250 With a minimum cement content of 300 Kg. per cubic meter. Price also to include shuttering, reinforcing 4Ø10 and stirrups 1Ø8@25cm ,and all related works according to drawings and specifications and engineer instructions. For the beams 20cmX 10cm above Hollow blocks	M <sup>2</sup>	40.0		
20.3.16	supply and install two Coats of Cement and Sand Plaster over one slurry coat to walls and ceilings and where required for External plastering. price include Waterproofing additive (W 290) with the second and last face and painting with standard approved colour Waterproofing supercyl for External walls of the existing structure at the entrance. Price to also include 2 coats of external painting (supercryle). To the toilets.	M <sup>2</sup>	155.0		
20.3.17	Supply and paint three coats polycide paint for ceilings including corridor ceilings of high quality (Approved by Palestine Standards Institution) and by the supervision engineer.	M <sup>2</sup>	46		
20.3.18	Supply and paint high quality emulsion paint, for top walls and internal drop beams (sides and bottom), on one priming coat and two finishing coats, using two coats of complete putty, as per satisfaction of the supervisor engineer.	M <sup>2</sup>	23		
20.3.19	Supply & paint three coats of external quality waterproofing supercyle paint for Corridors (walls) and parapet wall according to drawings and specifications.	M <sup>2</sup>	85		
20.3.20	Supply and Fix Factory-made Steel Doors as per drawings, specification. Price to include frame (door) (as per details), fixing completely, ironmongery, cylinders, cylindrical locks handles (Approved by Palestine Standards Institution). 6 mm. glazing, gaskets, oil Paint in three coats in addition to two primer coats. A 40cm x 40cm sign made of Metal shall be fixed on the door. The sign should be coloured and the icon and writing to be assigned by the supervision engineer, Dimensions: as per drawings	No.	1		
20.3.21	Supply and Install Non-Slip Coloured Ceramic Floor Tiles 0.6 cm Thickness. First choice and free from all defect grade "A". (Approved by Palestine Standards Institution). Price to include sand with cement filling (Grade B-100), pointing with white cement and cleaning on site, removal of the old tiles, levelling and all the necessary work to complete the job in accordance with the instructions of the supervision engineer.	M <sup>2</sup>	47		
20.3.22	Supply and Install White Glazed or coloured Ceramic Wall Tiles 0.6 cm Thickness, First choice European type and free from all defects Grade "A". (Approved by Palestine Standards Institution). Price to include white round aluminium edges patching around services. Two coats of epoxy pointing ..All works shall be in accordance with drawings and specifications.	M <sup>2</sup>	140		

20.3.23	Supply and Fix Wooden Doors 4.5 cm Thick single or double sashes. With (Frame).(4.5*3.5) cm hardwood (Zan) edging and (3.5*9.5) cm soft wood stile. Edge strip banding of width 4.5 mm. Formica over veneer on both sides, colour for frames and Architrave as directed by engineer. Door paneling to be soft wood 4.5*3.5 cm. each 4 cm., frames of galvanized steel sheet frame of 2mm thick for corridor doors ( as per drawings), width according to the wall thickness' and Allowance of 4 - 6 cm. thickness for plastering and tiling purposes, immersed in wood preservative before erection then embedded completely in sand - cement mortar and completely anchored as per specification. Architrave of Hardwood (Swedish)(4*1.2)cm, price to include ironmongery, kick plates of aluminium 20cm height from one side for main bath room doors, U shaped 10cm height from both sides at the bottom for internal doors kick plates of aluminium 20cm height for bath room doors, U shaped both sides, and at the bottom door stoppers, transparent fiber glass 6mm thick for both upper vision panel & for vision panel inside door leaf, gaskets cylindrical Lock ((Approved by Palestine Standards Institution), and painting in three coats of oil paint in addition to primer coat. Price includes also aluminium louvers of 50x60cm in the bottom for store doors. All as per Detailed Drawings, specification. Size as per drawings	No.	10		
20.3.24	Supply, fix and operate non sliding Aluminium Windows extrusion Section 7700 or equal, with protective electrostatic applied polyester powder paint of 70-80 microns. Price to include 6.38mm thick laminated glass (3+0.38+3mm) for double glass. float glazing and all other accessories and fittings to complete works as per drawings and specifications. Price shall include the steel protection from outside made of steel frame and steel wire mesh. Price shall also include painting, fixing etc.	M2	7		
20.3.25	Supply and apply app waterproofing membrane of bitumen rolls. (4 mm. of reinforced polyester sheets) covered with layer of white chipping, over roof slab and around parapets with overlaps of not less than 10 cm. Price to include primer coats of approval source according to specifications and engineer's instructions.	M <sup>2</sup>	47		
20.3.26	Supply and install Local marble threshold for under Doors and under windows 3-4 cm thickness	m2	13		
<b>B. Electrical Works</b>					
	<p>Preamble: All Supplied Materials Should be Local Made (if available), Grade A and Free From Defects, Having Supervisor Certificate From Palestinian Standard Institution (PSI).</p> <p>Price to include submittal and obtaining approval of shop drawings, detailed and as-built drawings for all works as well as coordinating the same with the other services, activities and furniture.</p> <p>Price to include, also, submittal of catalogues and manufacturer instruction. Fixtures and appliances shall be measured in number. Supply and feeder Cables, cable conduits and cable trays shall not be measured but included in DB's prices</p> <p>Manholes, handholds and the like shall be measured in number. All Systems and devices shall be in lump sum including installation, testing and commissioning.</p> <p>Rates of fixtures and appliances shall include installation, wiring, switches and conduit works.</p> <p>All systems equipment (Class A and approved by Palestine Standards Institution)</p>				
20.3.27	<p><b>Lighting points</b></p> <p>Supply, Install and Connect Lighting Points including fire proof boxes fire proof Conduits, fire retardant (E90) 3*1.5 mm2 cables and 5*1.5mm2 for emergency kits, Light Switches, and all accessories as per drawings and specifications. Price to also include any necessary painting or tiling after connecting the points.</p>	SET No.	6		

20.3.28	<p><b>Lighting fixtures</b> Supply, Install and Connect the following high frequency control gear Lighting Fixtures including P.F. correction capacitors, Lamps, installation for all lighting fixtures using galvanized iron chains to suspend the fixtures in the ceiling and all accessories as per drawings and specifications. Supply and install Surface mounted Type A or Type B as per drawings</p>	SET No.	6		
20.3.29	<p><b>Main Electrical Connection</b> Supply, Install and Connect 5x6mm<sup>2</sup> XLPE cable include 1Φ1.5" PVC conduit from MDB to the new Unit. Price shall also include excavation, any necessary painting, plastering or tiling after connecting the points.</p>	L.M	80		
<b>C. Mechanical Works</b>					
	<p>Preamble. Supply networks pipes To Tanks, or from on roof feeding tanks to collectors shall be priced in Linear meter. Water tanks shall be measured in number. , Sanitary Fixtures shall be measured in number, price to include cold and hot water pipes supply and fittings to collectors, also to include drain supply , fittings connection, to manholes. Drains, Floor Traps, Clean outs and the like shall be measured in number. Internal sanitary sewers network shall be included in the rates of sanitary fixtures and appliances. and the sanitary fixtures includes the cost of poexgol pipes for basins, toilets, science lab basins, home economics basins, ..etc., price also includes the connection to drainage network of these fixtures in sanitary units and labs. Vents and vertical stacks shall measured in linear meter. Manhole, Galleys and the like shall be measured in number. External sewers pipes shall be measured in linear meter for each individual diameter and material. Rates of all fittings , fixtures , appliances and pipe laying shall include:- Supply of material, workmanship, installation, testing and commissioning. Rates to include also all peace's and fittings, including by passes , floats, cleaning outlets , automatic vents, vents and stack covers, valves and non return valves and the like needed to complete works as per specifications. Insulation and painting as called for in specifications. Excavation and cutting for all pipe laying works, bedding back filling and all works connected with pipe laying. All ties, sleeves, joints, tie bolts and rods, brackets and the like. Rates to include Workshops, Coordinated and as- built drawings as approved by the Engineer. , the contractor should submit best quality, approved two brands for each mechanical works items for approval, and should be approved by PSI, any cut in blocks for installations should be done using special cutting machine, (all mechanical materials as sanitary fixtures fixtures, devices should be Italy made, Germany, Spanish made or equivalent )</p>				
20.3.30	<p>Supply &amp; Install Porcelain W.C. bowl class "A" white or coloured , (Italy, Spanish made or equivalent) with heavy duty seat and cover. Price includes plastic flush tank, hanging iron steel bracket, bolts and nuts, as well as flexible flush hose , valve, porcelain paper holder, connection to pexogol pipe, connection to drainage and all related materials. Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include complete removal of the old toilets, replacement of any broken tiles, broken valves and then supplying new Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings as per specifications , drawing and as directed by supervision engineer.</p>	Complete Set	4		
20.3.31	<p>Supply and install Arabic style and Supply &amp; Install Porcelain W.C. bowl class "A" white or coloured , (Italy, Spanish made or equivalent) with heavy duty seat and cover. Price includes plastic flush tank, hanging iron steel bracket, bolts and nuts, as well as flexible flush hose , valve, porcelain paper holder, connection to pexogol pipe, connection to drainage and all related materials. Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include complete removal of the old toilets, replacement of any broken tiles, broken valves and then supplying new Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings as per specifications , drawing and as directed by supervision engineer.</p>	Complete Set	6		

20.3.32	Supply & Install Porcelain wall hung wash basin white or coloured engineer of size 50 x 45 cm of approved brand (Italy, Spanish made or equivalent), Price shall include chromium plated mixer with chromium plated handle mounted on wall. the price also includes connection to Pexogol pipe, liquide soap holder , and all fixation and hanging bracket. Price includes supplying and installing 40x60cm mirror., semi pedestal and all other required materials, including connection to drainage system.	Complete Set	5		
20.3.33	Supply and install 6" UPVC pipes SN8 heavy duty, at least (4.9mm) thick, Local Made or equal and must be approved by Palestine Standard Institution, between manholes in with all required materials, sockets, fittings , rubber seals, elbow, etc. The price includes excavation ,backfilling of at least 15 cm sand above , below and around the pipes including back-filling of selected material above the sand, and disposal of surplus excavated materials. Excavation shall be to any depth, width, and in any type of soil or rock, connection for internal sewerage network to connect to existing or proposed new sewage network or the septic tank and insulation of septic tank wall after connection.	L.M	25		
20.3.36	Supply and install 1" diameter pipe schedule 40 galvanized steel pipes with all necessary fittings such as elbows Tees, unions, air vents, supports, hangers, shields, saddles, plastic tape etc. All piping hung on shafts, or in riser, and in sanitary block are measured in meter run. All pipes imbedded in walls or in site external shall be coated with layers of extruded polyethylene. All pipe joints imbedded in walls shall be coated with thick asphalt layer, all hot water pipes shall be insulated with polyethylene and to be cladded on roof. Price to also include any necessary painting or tiling after connecting the points. The works shall include bring the water from the nearest source.	L.M	50		
20.3.37	Supply and install 4" galvanized vertical pipes heavy duty for rain water, Local Made or equal and must be approved by Palestine Standard Institution. Price includes digging for pipes, supports, hangers , and all rubber joints and sealants, and rainwater pipe end outlets from roof to ground.	L.M	6		
20.3.38	Heavy duty stainless steel 4" floor drain syphon trap with screw type screen and with closed covers for urinals , all of approved brand , complete with all required fittings and connections using reduced "T" for connecting sanitary fixtures, the traps in stairs to be with closed cover	No	2		
20.3.39	Supply and Install of Precast Concrete Manholes with minimum 15cm wall thickness for sewage and storm water drainage In compliance with specifications and Drawings. Price shall include excavation to any depth according to slopes, B200 reinforced concrete for base, back filling, cement plaster, benching, 8 or 25Ton Cast Iron cover as indicated , drop if needed, and all necessary works. all as shown in drawings, specifications, and approval of supervisor engineer. a. Ø60cm, 8 ton C.I cover	NO.	2		

20.3.40	Supply and install wall/window type exhaust fans of approved manufacture (European type or equal) complete with self – act automatic shutter. Price includes galvanized ducts, grills, shutter and making necessary holes in walls or glass and fixing, and wiring cables all as per specifications, and approval of supervisor engineer. The fan shall have it is own electrical wiring inside walls or ceiling, one socket/key etc. The price shall include any excavation, painting, plastering etc. all as shown in drawings, specifications, and approval of supervisor engineer. Extract Fan, 100 CFM	No.	6		
20.3.41	Supply and Install Polyethylene White, domestic Water Tank. Capacity 1500 lit. "With Quality approval Tag" Including well painted steel balustrade support , automatic copper float valve, isolating valves, drain valve, fittings, vents, screwed cover, piping and connections till main cold water piping and all accessories; all according to the engineers' instructions and approval, the mounting of the tanks should be according to details including special bracing and flexible connections, painted steel base and what is required to complete the work. The price shall also include Steel structure with 2 meter hight to carry the tank safely.	No.	4		
20.3.42	Supply and install floor cleanout 4" UPVC including stainless steel (sraled type) cover (15*15cm) complete with connection to drain pipes as located in drawings, specifications and approval of supervisor engineer	No.	3		
20.3.43	Supply, install and test Copper Collectors 3/4" dia., of approved brand. Price shall include all openings (eyes), and shall include for the required copper adaptors, hangers, supports, ties, air vents. Collectors shall be installed on walls, as shown on drawings. The work shall be completed as specified and according to the Engineer's instructions.	eye	43		
20.4	Rehabilitation of existing handicap Unit				
<b>A. Civil Works</b>					
20.4.1	Supply and paint three coats polycide paint for ceilings including corridor ceilings of high quality (Approved by Palestine Standards Institution) and by the supervision engineer.	M <sup>2</sup>	6.0		
20.4.2	Supply and paint high quality emulsion paint, for top walls and internal drop beams (sides and bottom), on one priming coat and two finishing coats, using two coats of complete putty, as per satisfaction of the supervisor engineer.	M <sup>2</sup>	7.0		
20.4.3	Supply and Fix Factory-made Steel Doors as per drawings, specification. Price to include frame (door) (as per details) fixing completely, ironmongery, cylinders, cylindrical locks handles (Approved by Palestine Standards Institution). 6 mm. glazing, gaskets, oil Paint in three coats in addition to two primer coats. A 40cm x 40cm sign made of Metal shall be fixed on the door. The sign should be coloured and the icon and writing to be assigned by the supervision engineer,	No.	1.0		
20.4.4	Supply and Install Non-Slip Coloured Ceramic Floor Tiles 0.6 cm Thickness. First choice and free from all defect grade "A". (Approved by Palestine Standards Institution). Price to include sand with cement filling (Grade B-100), pointing with white cement and cleaning on site, removal of the old tiles, levelling and all the necessary work to complete the job in accordance with the instructions of the supervision engineer.	M <sup>2</sup>	6.5		

20.4.5	Supply and Install White Glazed or coloured Ceramic Wall Tiles 0.6 cm Thickness, First choice European type and free from all defects Grade "A". (Approved by Palestine Standards Institution). Price to include white round aluminium edges patching around services. Two coats of epoxy pointing ..All works shall be in accordance with drawings and specifications.	M <sup>2</sup>	22		
20.4.6	Supply, fix and operate non sliding Aluminium Windows extrusion Section 7700 or equal, with protective electrostatic applied polyester powder paint of 70-80 microns. Price to include 6.38mm thick laminated glass (3+0.38+3mm) for double glass. float glazing and all other accessories and fittings to complete works as per drawings and specifications. Price shall include the steel protection from outside made of steel frame and steel wire mesh. Price shall also include painting, fixing etc.	M <sup>2</sup>	1		
20.4.7	Supply and apply app waterproofing membrane of bitumen rolls. (4 mm. of reinforced polyester sheets) covered with layer of white chipping, over roof slab and around parapets with overlaps of not less than 10 cm. Price to include primer coats of approval source according to specifications and engineer's instructions.	M <sup>2</sup>	7		
<b>A. Mechanical Works</b>					
	Preamble. Supply networks pipes To Tanks, or from on roof feeding tanks to collectors shall be priced in Linear meter. Water tanks shall be measured in number , Sanitary Fixtures shall be measured in number, price to include cold and hot water pipes supply and fittings to collectors, also to include drain supply , fittings connection, to manholes. Drains, Floor Traps, Clean outs and the like shall be measured in number. Internal sanitary sewers network shall be included in the rates of sanitary fixtures and appliances. and the sanitary fixtures includes the cost of poexgol pipes for basins, toilets, science lab basins, home economics basins, ..etc., price also includes the connection to drainage network of these fixtures in sanitary units and labs. Vents and vertical stacks shall measured in linear meter. Manhole, Galleys and the like shall be measured in number. External sewers pipes shall be measured in linear meter for each individual diameter and material. Rates of all fittings , fixtures , appliances and pipe laying shall include:- Supply of material, workmanship, installation, testing and commissioning. Rates to include also all peace's and fittings, including by passes , floats, cleaning outlets , automatic vents, vents and stack covers, valves and non return valves and the like needed to complete works as per specifications. Insulation and painting as called for in specifications. Excavation and cutting for all pipe laying works, bedding back filling and all works connected with pipe laying. All ties, sleeves, joints, tie bolts and rods, brackets and the like. Rates to include Workshops, Coordinated and as- built drawings as approved by the Engineer. , the contractor should submit best quality, approved two brands for each mechanical works items for approval, and should be approved by PSI, any cut in blocks for installations should be done using special cutting machine, (all mechanical materials as sanitary fixtures fixtures, devices should be Italy made, Germany, Spanish made or equivalent )				
20.4.8	Supply and Install White Vitreous Western type handicapped Toilet (Class A and approved by Palestine Standards Institution) Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings, accessories movable handle and fixed handle as shown on drawings and in Specifications. as per specifications , drawing and as directed by supervision Engineer.	Complete Set	1		

<b>18.4.13</b>	Supply and Install White Vitreous China handicapped Wash Basin(sliding type) (Class A and approved by Palestine Standards Institution), size (40 * 56) cm. Complete with all fittings, valves, waste pipes to nearest floor trap, taps or mixer (Class A and approved by Palestine Standards Institution), connection to water distribution, traps, and any other necessary parts as Specification and as directed by Eng. Price includes supplying and installing 40x60cm mirror. Gear tap.	Complete Set	1		
<b>20.4.10</b>	Supply and install wall/window type exhaust fans of approved manufacture (European type or equal) complete with self – act automatic shutter. Price includes galvanized ducts, grills, shutter and making necessary holes in walls or glass and fixing, and wiring cables all as per specifications, and approval of supervisor engineer. The fan shall have it is own electrical wiring inside walls or ceiling, one socket/key etc. The price shall include any excavation, painting, plastering etc. all as shown in drawings, specifications, and approval of supervisor engineer. Extract Fan, 100 CFM	No.	1		
<b>Total Al Nithamiye Preparatory Girls School (NIS)</b>					



BILLS OF QUANTITIES					
CONSULTANT: Universal Group for Engineering and Consulting			DATE: March 2023		
Al Saray'a Secondary Boys School					
ITEM No.	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (ILS)	AMOUNT (ILS)
211.0	Preliminary Items				
21.1.1	Supply and installation of the project marble sign (110 cm x 70cm) that include coloured project information. The Contractor shall do the design and fix the sign as per the supervision engineer instructions. The price shall include fixing the sign properly with all required drilling, jumbo bolts, rehabilitation of any damages occurred during fixation.	No.	1		
21.1.2	Remove carefully works inside the WASH facilities (WCs). The price shall include but not limited to remove carefully, main doors, WC doors, sinks, wash basins, lighting Points, Collectors, accessories, taps, etc. all as per drawings, and Engineer instructions. The Contractor shall transport all removed materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
21.2	External Works				
21.2.1	<b>Awning Works</b> Supply and install steel awning at one location or several location as per the detail in the drawing and as per supervision engineer. The price shall also include all steel tubes (columns, horizontal, vertical etc.), steel corrugated sheets, drain gutters, steel bolts, excavation, backfilling, reinforced concrete foundations, reinstatement, 3 Inch galvanized Steel rain water, painting, the fixation, joints, angles and whatever necessary to complete the work in accordance with the drawings, specifications and to the approval of the supervision engineer. Price to include any required works including but not limited to, sealant works, fixing, fastening, welding etc. The Hight of the awning as per drawings or 3.5 meter if not mentioned. The final location or several locations of awning will be fixed during the shop drawing phase and as instructed by the supervision engineer, the Contractor shall not claim for additional cost or object.	m2	25		
21.2.2	<b>Drinking Fountain Works for KG:</b> Remove the old Drinking Fountain and Supply and install for KG outside drinking fountain as shown on drawings, rate includes, sink 3 m long on block stands as per detail, the work should be finished and completed to the highest standard. Rate include galvanized mesh fence with steel frame 2.5 diameter standard 0.5inch * 0.5 inch spacing for the mesh, hinges, metal angles, lock, reinforced concrete of 10cm thick with external plastering, sand and cement mortar, 20*20cm ceramic tiles, 2 inch pvc pipe, 10-cm cement blocks, 5 unit high quality (Class A and approved by Palestine Standards Institution) chrome plated taps of approved kind, rates also include p.v.c. Drainpipe outlet to the nearest manhole. And the accessories and equipment needed to finish the work in accordance with the details and the instructions of the supervision engineer. Price shall also include all necessary excavation, backfilling, reinforced concrete, reinstatement etc.	L.S	1		
21.2.3	<b>Two Steps Works</b> Supply and Cast two steps (19 cm each) (both width 80cm) and (1.8m long) made of natural stones on all sides and Reinforced Concrete Grade 'B350 and With a minimum cement content of 400 Kg. per cubic meter. Price also to include reinforcing 1Ø14@20cm both way shuttering, reinforcing, and all related works according to drawings and specifications and engineer instructions.	L.S	1		
21.3	Rehabilitation of Existing WASH unit				
A. Civil Works					
21.3.1	Supply and paint three coats polycide paint for ceilings including corridor ceilings of high quality (Approved by Palestine Standards Institution) and by the supervision engineer.	M <sup>2</sup>	24		
21.3.2	Supply and paint high quality emulsion paint, for top walls and internal drop beams (sides and bottom), on one priming coat and two finishing coats, using two coats of complete putty, as per satisfaction of the supervisor engineer.	M <sup>2</sup>	16		

21.3.3	Supply and Install Non-Slip Coloured Ceramic Floor Tiles 0.6 cm Thickness. First choice and free from all defect grade "A". (Approved by Palestine Standards Institution). Price to include sand with cement filling (Grade B-100), pointing with white cement and cleaning on site, removal of the old tiles, levelling and all the necessary work to complete the job in accordance with the instructions of the supervision engineer.	M <sup>2</sup>	25.0		
21.3.4	Supply and Install White Glazed or coloured Ceramic Wall Tiles 0.6 cm., First choice European type and free from all defects Grade "A". (Approved by Palestine Standards Institution). Price to include white round aluminium edges patching around services. Two coats of epoxy pointing ..All works shall be in accordance with drawings and specifications.	M <sup>2</sup>	70		
21.3.5	Supply and Fix Factory-made Steel Doors as per drawings, specification. Price to include frame ( door) (as per details), fixing completely, ironmongery, cylinders, cylindrical locks handles (Approved by Palestine Standards Institution). 6 mm. glazing, gaskets, oil Paint in three coats in addition to two primer coats. A 40cm x 40cm sign made of Metal shall be fixed on the door. The sign should be coloured and the icon and writing to be assigned by the supervision engineer, Dimensions: as per drawings	No.	1		
21.3.6	Supply and Fix Wooden Doors 4.5 cm Thick single or double sashes. With (Frame)(4.5*3.5) cm hardwood (Zan) edging and (3.5*9.5) cm soft wood stile. Edge strip banding of width 4.5 mm. Formica over veneer on both sides, colour for frames and Architrave as directed by engineer. Door paneling to be soft wood 4.5*3.5 cm. each 4 cm., frames of galvanized steel sheet frame of 2mm thick for corridor doors ( as per drawings), width according to the wall thickness' and Allowance of 4 - 6 cm. thickness for plastering and tiling purposes, immersed in wood preservative before erection then embedded completely in sand - cement mortar and completely anchored as per specification. Architrave of Hardwood (Swedish)(4*1.2)cm, price to include ironmongery, kick plates of aluminium 20cm height from one side for main bath room doors, U shaped 10cm height from both sides at the bottom for internal doors kick plates of aluminium 20cm height for bath room doors, U shaped both sides, and at the bottom door stoppers, transparent fiber glass 6mm thick for both upper vision panel & for vision panel inside door leaf, gaskets cylindrical Lock ((Approved by Palestine Standards Institution), and painting in three coats of oil paint in addition to primer coat. Price includes also aluminium louvers of 50x60cm in the bottom for store doors. All as per Detailed Drawings, specification. Size as per drawings	No.	4		
<b>B. Electrical Works</b>					
	<p>Preamble: All Supplied Materials Should be Local Made (if available), Grade A and Free From Defects, Having Supervisor Certificate From Palestinian Standard Institution (PSI).</p> <p>Price to include submittal and obtaining approval of shop drawings, detailed and as-built drawings for all works as well as coordinating the same with the other services, activities and furniture.</p> <p>Price to include, also, submittal of catalogues and manufacturer instruction. Fixtures and appliances shall be measured in number. Supply and feeder Cables, cable conduits and cable trays shall not be measured but included in DB's prices</p> <p>Manholes, handholds and the like shall be measured in number. All Systems and devices shall be in lump sum including installation, testing and commissioning.</p> <p>Rates of fixtures and appliances shall include installation, wiring, switches and conduit works.</p> <p>All systems equipment (Class A and approved by Palestine Standards Institution)</p>				

21.3.7	<p><b>Lighting points</b> Supply, Install and Connect Lighting Points including fire proof boxes fire proof Conduits, fire retardant (E90) 3*1.5 mm2 cables and 5*1.5mm2 for emergency kits, Light Switches, and all accessories as per drawings and specifications. Price to also include any necessary painting or tiling after connecting the points.</p>	SET No.	4		
21.3.8	<p><b>Lighting fixtures</b> Supply, Install and Connect the following high frequency control gear Lighting Fixtures including P.F. correction capacitors, Lamps, installation for all lighting fixtures using galvanized iron chains to suspend the fixtures in the ceiling and all accessories as per drawings and specifications. Supply and install Surface mounted globe 13.5W/1100lm with metal based and opal diffuser, IP65.</p>	SET No.	4		
<b>C. Mechanical Works</b>					
	<p>Preamble. Supply networks pipes To Tanks, or from on roof feeding tanks to collectors shall be priced in Linear meter. Water tanks shall be measured in number. , Sanitary Fixtures shall be measured in number, price to include cold and hot water pipes supply and fittings to collectors, also to include drain supply , fittings connection, to manholes. Drains, Floor Traps, Clean outs and the like shall be measured in number.</p> <p>Internal sanitary sewers network shall be included in the rates of sanitary fixtures and appliances. and the sanitary fixtures includes the cost of poexgol pipes for basins, toilets, science lab basins, home economics basins, .etc., price also includes the connection to drainage network of these fixtures in sanitary units and labs. Vents and vertical stacks shall measured in linear meter. Manhole, Galleys and the like shall be measured in number. External sewers pipes shall be measured in linear meter for each individual diameter and material. Rates of all fittings , fixtures , appliances and pipe laying shall include:- Supply of material, workmanship, installation, testing and commissioning. Rates to include also all peace's and fittings, including by passes , floats, cleaning outlets , automatic vents, vents and stack covers, valves and non return valves and the like needed to complete works as per specifications. Insulation and painting as called for in specifications. Excavation and cutting for all pipe laying works, bedding back filling and all works connected with pipe laying. All ties, sleeves, joints, tie bolts and rods, brackets and the like. Rates to include Workshops, Coordinated and as- built drawings as approved by the Engineer. , the contractor should submit best quality, approved two brands for each mechanical works items for approval, and should be approved by PSI, any cut in blocks for installations should be done using special cutting machine, (all mechanical materials as sanitary fixtures fixtures, devices should be Italy made, Germany, Spanish made or equivalent )</p>				
21.3.9	<p>Replace old Arabic style and Supply &amp; Install Porcelain W.C. bowl class "A" white or coloured , (Italy, Spanish made or equivalent) with heavy duty seat and cover. Price includes plastic flush tank, hanging iron steel bracket, bolts and nuts, as well as flexible flush hose , valve, porcelain paper holder, connection to pexogol pipe, connection to drainage and all related materials. Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include complete removal of the old toilets, replacement of any broken tiles, broken valves and then supplying new Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings as per specifications , drawing and as directed by supervision engineer.</p>	Complete Set	3		
21.3.10	<p>Supply &amp; Install Porcelain wall hung wash basin white or coloured engineer of size 50 x 45 cm of approved brand (Italy, Spanish made or equivalent), Price shall include chromium plated mixer with chromium plated handle mounted on wall. the price also includes connection to Pexogol pipe, liquide soap holder , and all fixation and hanging bracket. Price includes supplying and installing 40x60cm mirror., semi pedestal and all other required materials, including connection to drainage system.</p>	Complete Set	3		

21.3.11	Remove the old Arabic Style toilets and supply & Install a new one with all its accessories. Price includes plastic flush tank, hanging iron steel bracket, bolts and nuts, as well as flexible flush hose , valve, porcelain paper holder, connection to pexogol pipe, connection to drainage and all related materials. Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include complete removal of the old toilets, replacement of any broken tiles, broken valves and then supplying new Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings as per specifications , drawing and as directed by supervision engineer.	Complete Set	1		
21.3.12	Supply and install wall/window type exhaust fans of approved manufacture (European type or equal) complete with self – act automatic shutter. Price includes galvanized ducts, grills, shutter and making necessary holes in walls or glass and fixing, and wiring cables all as per specifications, and approval of supervisor engineer. The fan shall have it is own electrical wiring inside walls or ceiling, one socket/key etc. The price shall include any excavation, painting, plastering etc. all as shown in drawings, specifications, and approval of supervisor engineer. Extract Fan, 100 CFM	No.	2		
21.3.13	Supply, install and test Copper Collectors 3/4" dia., of approved brand. Price shall include all openings (eyes), and shall include for the required copper adaptors, hangers, supports, ties, air vents. Collectors shall be installed on walls, as shown on drawings. The work shall be completed as specified and according to the Engineer's instructions.	eye	12		
21.4	<b>Rehabilitation and Existing of existing handicap WASH unit</b>				
21.4.1	Supply and paint three coats polycide paint for ceilings including corridor ceilings of high quality (Approved by Palestine Standards Institution) and by the supervision engineer.	M <sup>2</sup>	4		
21.4.2	Supply and paint high quality emulsion paint, for top walls and internal drop beams (sides and bottom), on one priming coat and two finishing coats, using two coats of complete putty, as per satisfaction of the supervisor engineer.	M <sup>2</sup>	3		
21.4.3	Supply and Fix Factory-made Steel Doors as per drawings, specification. Price to include frame (door) (as per details), fixing completely, ironmongery, cylinders, cylindrical locks handles (Approved by Palestine Standards Institution). 6 mm. glazing, gaskets, oil Paint in three coats in addition to two primer coats. A 40cm x 40cm sign made of Metal shall be fixed on the door. The sign should be coloured and the icon and writing to be assigned by the supervision engineer, Dimensions: as per drawings	No.	1		
21.4.4	Supply and apply app waterproofing membrane of bitumen rolls. (4 mm. of reinforced polyester sheets) covered with layer of white chipping, over roof slab and around parapets with overlaps of not less than 10 cm. Price to include primer coats of approval source according to specifications and engineer's instructions.	M <sup>2</sup>	4.0		
<b>Total Al Saray'a Secondary Boys School (NIS)</b>					

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BILLS OF QUANTITIES					
CONSULTANT: Universal Group for Engineering and Consulting			DATE: March 2023		
Um Al Shuqhan Preparatory co-ed School					
ITEM No.	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (ILS)	AMOUNT (ILS)
23.1	Preliminary Items				
23.1.1	Supply and installation of the project marble sign (110 cm x 70cm) that include coloured project information. The Contractor shall do the design and fix the sign as per the supervision engineer instructions. The price shall include fixing the sign properly with all required drilling, jumbo bolts, rehabilitation of any damages occurred during fixation.	No.	1		
23.2	External Works				
23.2.1	<u>Drinking Fountain Works:</u> Remove the old Drinking Fountain and Supply and install for KG outside drinking fountain as shown on drawings, rate includes, sink 3 m long on block stands as per detail, the work should be finished and completed to the highest standard. Rate include galvanized mesh fence with steel frame 2.5 diameter standard 0.5inch * 0.5 inch spacing for the mesh, hinges, metal angles, lock, reinforced concrete of 10cm thick with external plastering, sand and cement mortar, 20*20cm ceramic tiles, 2 inch pvc pipe, 10-cm cement blocks, 5 unit high quality (Class A and approved by Palestine Standards Institution) chrome plated taps of approved kind, rates also include p.v.c. Drainpipe outlet to the nearest manhole. And the accessories and equipment needed to finish the work in accordance with the details and the instructions of the supervision engineer. Price shall also include all necessary excavation, backfilling, reinforced concrete, reinstatement etc.	L.S	1		
23.2.2	<u>Awning Works</u> Supply and install steel awning at one location or several location as per the detail in the drawing and as per supervision engineer. The price shall also include all steel tubes (columns, horizontal, vertical etc.), steel corrugated sheets, drain gutters, steel bolts, excavation, backfilling, reinforced concrete foundations, reinstatement, 3 Inch galvanized Steel rain water, painting, the fixation, joints, angles and whatever necessary to complete the work in accordance with the drawings, specifications and to the approval of the supervision engineer. Price to include any required works including but not limited to, sealant works, fixing, fastening, welding etc. The Hight of the awning as per drawings or 3.5 meter if not mentioned. The final location or several locations of awning will be fixed during the shop drawing phase and as instructed by the supervision engineer, the Contractor shall not claim for additional cost or object.	m2	25		
23.3	Supply and Installation of New WASH unit (Removable Structure)				
A. Civil Works					
23.3.1	Site clearance of any type of stairs, reinforced concrete, trees, branches, rocks, etc. in order to start the work. While keeping the trees intact and safe in order to re-plant the trees in a suitable place in accordance with the supervision engineer and to his approval.	L.S	1.0		
23.3.2	Import and fill with selected Imported Approved Fill; to the required levels and where directed by the Engineer. Filling shall be on layers not to exceed 20cm. thick. Price to include levelling, watering and compacting to 98 % field density and all related works according to drawings and specifications and engineer instructions. The contractor to backfill using excavated soil if suitable or imported approved material.	M3	20.0		
23.3.3	Supply and Well Compact 40cm thick Base Coarse as per drawing compacted to min.98% of maximum dry density of modified Proctor, in layers 20cm thick. Price includes levelling, watering, levelling and compacting of ground (sub-base) under base coarse to min. 98% according to Field Density Test. Under foundation	M2	20.0		

23.3.4	<p>Blinding Concrete grade 'B200' With a minimum cement content of 250 Kg. per cubic meter under footings and tie beams and where required, Thickness not less than 10cm thick, should be according to drawings. Price to include all required work according to specifications and drawings and engineer instruction.</p>	M2	38.0		
23.3.5	<p>Supply and Build Concrete Block Walls, 'Grade 35' of any size blocks single or cavity. the measurements will be to one side only all done according to the dwg. specifications and Engineer instructions and approval. Hollow blocks 20 cm thick for the walls of the toilet. Price shall also include Supply and Cast Reinforced Concrete Grade 'B250 With a minimum cement content of 300 Kg. per cubic meter. Price also to include shuttering, reinforcing 4Ø10 and stirrups 1Ø8@25cm, and all related works according to drawings and specifications and engineer instructions. For the beams 20cmX 20cm above Hollow blocks</p>	M <sup>2</sup>	10.0		
23.3.6	<p>Supply, connect and operate Mobile Latrines according to drawings and following specifications: with a whole area of 1.52 m2 and dimensions of (1.18*1.29) m2 taking into consideration the following specifications: (as per picture), the price includes:</p> <ul style="list-style-type: none"> <li>• External walls: silver or white colour for galvanized double steel sheets 0.5 mm insulated with 5 cm Kalkal boards; dimensions (118*200*5) cm, each wall side should be of one board (no connections).</li> <li>• All corners of the latrine walls should be gathered with L galvanized steel angles; dimensions (5*5*0.125) cm from inside, (10*10*0.125) cm from outside and (5*5*0.125) cm to link walls to floor, and 10*5*10*0.125 for the edges, fixed by special screws and elastic sealing rubber, to prevent water leakage, with distances according to the Engineer instructions and approval.</li> <li>• Ceiling: consisting of 2 mm thick galvanized steel sheets supported with 4x4x0.15 cm galvanized steel profile and fixed to the walls according to the drawings.</li> <li>• Latrine floor: 3 mm steel sheet" mobazar". The steel sheet should fixed by welding, covered with 5 mm thickness of plastic water-resistant layer (PVC) of Italian type, sealed with silicon and tape 5-7 cm height on internal side continuously with the ground sheet to ensure an adequate seal. Steel profiles 30 cm length; the supporting profiles 5*5 and 4*4 cm, 0.15 thickness should be fixed by welding as mentioned in the drawings</li> </ul>				

	<ul style="list-style-type: none"> <li>• White aluminium window (45*45) cm2 of class A section 4000. Window glass is 4mm thick, wired chipped type (mobazzar) with a fixed external mosquito net; treated where needed with silicon sealant</li> <li>• Door: door should be of the same as the wall material (5 cm Kalkal board), with galvanized steel handles and internal and external locks. All necessary fixing frames according to the drawings.</li> <li>• Porcelain W.C. bowl class "A" white or coloured.</li> <li>• Water tap of type Chrome (long neck), 2 items-one for the basin, and the second for water outlet point. White Basin of type HARSA, (38*45) cm or equivalent.</li> <li>• Piping works, connecting 4" PVC pipes, one for sewage, to connect the latrine sewer to the fixed cesspit tank (drilled barrel) or-( available sewer system in the area only if approved by the engineer) with correct distance of maximum 3 meters length. A second 4" PVC pipe for ventilation should be fixed, where ventilations pipes are rising vertically 20 cm from the latrine roof; covered with meshed plastic cap.</li> <li>• Connecting 2"PVC discharge pipes for wastewater from the washbasins.</li> <li>• Galvanized tin water tank of 24 liters capacity, with (0.4*0.2*0.3) m, and 1.5 mm thickness, prepared with water float and connected to the water source.</li> <li>• All necessary pipelines and fittings to ensure that the water supply, sewer and drainage systems all work correctly. Use ½" steel pipes for internal connections, and connection between the water inlets in the latrine to the available water source (water tank or water network) with HDPE pipes of the required length to ensure correct water pressure flow.</li> <li>• Steel barrel with drilled holes; a proportion of the base removed to be fixed and buried at least 2.0 m from the latrine, with 1/4 m3 capacity and of 1.5 mm thickness to be used for drainage.</li> <li>• Steel skeleton works: galvanized steel profile welded correctly and painting of the welding lines with Anti Rust paint as follows:</li> <li>• Floor supporting profiles: (5*5) cm, &amp; 0.15cm thickness, and 4*4 cm, 0.15 cm thickness for the cross supporting.</li> <li>• Ceiling supporting profiles: (4*4) cm, &amp; 1.5 mm thickness.</li> <li>• Latrine legs: (5*5*38) cm L section with 3 mm thickness welded to Steel plate 10*10*0.3 cm</li> </ul> <p>Fixing latrines: fixation of mobile latrine legs to ground with steel angles bolted to the legs. The steel angle used should be chamfered from the bottom for easier penetration of the ground; dimensions (5*5) cm and 3 mm thickness. The angle length of 60 cm, hammered into ground and welded/bolted to the latrine legs (if rocky ground is available jumbo screws can be used for the support fixation to the ground), two B-250 concrete belt of 15*20cm should be cast between latrine legs. All should be inline and according to the Engineer instructions and approval. Also concrete step should be casted with width 0.3 and depth 0.15 at the entrance of the latrines.</p> <ul style="list-style-type: none"> <li>• Welding should be of CO2 method, implemented in lines (not point welds), wherever an intersection line exists between the different steel sections. The welding line should be painted with a similar colour to the profiles using a</li> </ul>	No.	2		
23.3.7	<p>Ditto but for Supply, connect and operate Mobile Latrines according to drawings and as the previous specifications but suitable in specifications and are for handicap with a whole area of 4.75 m2 and dimensions of (2.5*1.6)m2 taking into consideration all the previous specifications and the attached drawings for the handicap mobile latrines.</p> <p>The Toilet should be White Vitreous China European type Toilet (Class A and approved by Palestine Standards Institution) Complete with European made flush valve, fittings, including all the required tools to assist the disabilities for movements as mentioned in the drawings. The wash basin White Vitreous China Wash Basin (Class A and approved by Palestine Standards Institution), size (40*56) cm suitable for disabilities.</p>	No.	1.0		



23.3.8	<p>Supply and Install Polyethylene White, domestic Water Tank. Capacity 1500 lit. "With Quality approval Tag" Including well painted steel balustrade support , automatic copper float valve, isolating valves, drain valve, fittings, vents, screwed cover, piping and connections till main cold water piping and all accessories; all according to the engineers' instructions and approval, the mounting of the tanks should be according to details including special bracing and flexible connections, painted steel base and what is required to complete the work. The price shall also include Steel structure with 2 meter hight to carry the tank safely.</p>	No.	2		
Total Um Al Shuqhan Preparatory co-ed School (NIS)					

BILLS OF QUANTITIES					
CONSULTANT: Universal Group for Engineering and Consulting			DATE: March 2023		
Al Zeef Preparatory Boys School					
ITEM No.	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (ILS)	AMOUNT (ILS)
24.1	Preliminary Items				
24.1.1	Supply and installation of the project marble sign (110 cm x 70cm) that include colored project information. The Contractor shall do the design and fix the sign as per the supervision engineer instructions. The price shall include fixing the sign properly with all required drilling, jumbo bolts, rehabilitation of any damages occurred during fixation.	No.	1		
24.1.2	Demolishing works for 8m2 old WASH facility. The price shall include remove carefully of what inside the facility and complete demolish of the units. The Contractor shall transport all removed materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
24.1.3	Allow for every cost and work to secure access to the site. The price shall include all needed works such (remove any obstacles or walls etc.) to allow access to the site for the Contractor machines and manpower etc.. The Contractor shall reinstate any damage he occurs during implementation and any structure he domlish to its original condtions.	L.S	1		
24.2	External Works				
24.2.1	<b>Awning Works</b> Supply and install steel awning at one location or several location as per the detail in the drawing and as per supervision engineer. The price shall also include all steel tubes (columns, horizontal, vertical etc.), steel corrugated sheets, drain gutters, steel bolts, excavation, backfilling, reinforced concrete foundations, reinstatement, 3 Inch galvanized Steel rain water, painting, the fixation, joints, angles and whatever necessary to complete the work in accordance with the drawings, specifications and to the approval of the supervision engineer. Price to include any required works including but not limited to, sealant works, fixing, fastening, welding etc. The Hight of the awning as per drawings or 3.5 meter if not mentioned. The final location or several locations of awning will be fixed during the shop drawing phase and as instructed by the supervision engineer, the Contractor shall not claim for additional cost or object.	m2	25		
24.3	Construction of a new WASH Facility				
A. Civil Works					
24.3.1	Site clearance of any type of stairs, reinforced concrete, trees, branches, rocks, etc. in order to start the work. While keeping the trees intact and safe in order to re-plant the trees in a suitable place in accordance with the supervision engineer and to his approval.	L.S	1.0		
24.3.2	Excavation for foundations and/or ground beam in any kind of soil or rock to the dimensions and levels shown in the drawings. (from N.G.L to bottom of hardcore layer) Price to include removal of extra and unsuitable soil to approved location. The price shall include reinstatement of any damage occurred during excavation. All as per drawings and specifications and supervision instructions.	M3	6.0		
24.3.3	Import and fill with selected Imported Approved Fill; to the required levels and where directed by the Engineer. Filling shall be on layers not to exceed 20cm. thick. Price to include leveling, watering and compacting to 98 % field density and all related works according to drawings and specifications and engineer instructions. The contractor to backfill using excavated soil if suitable or imported approved material.	M3	3.0		

<b>24.3.4</b>	Supply and Well Compact 40cm thick Base Coarse as per drawing compacted to min.98% of maximum dry density of modified Proctor, in layers 20cm thick. Price includes leveling, watering, leveling and compacting of ground (sub-base) under base coarse to min. 98% according to Field Density Test. Under foundation	M2	28.0		
<b>24.3.5</b>	Blinding Concrete grade 'B200' With a minimum cement content of 250 Kg. per cubic meter under footings and tie beams and where required, Thickness not less than 10cm thick, should be according to drawings. Price to include all required work according to specifications and drawings and engineer instruction.	M2	10.0		
<b>24.3.6</b>	Supply and Cast Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include shuttering, reinforcing, painting with two coats of hot bitumen (75/25) (for the buried parts) and all related works according to drawings and specifications and engineer instructions. For the foundations	M3	4.0		
<b>24.3.7</b>	Supply and Cast Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include shuttering, reinforcing, painting with two coats of hot bitumen (75/25) (for the buried parts) and all related works according to drawings and specifications and engineer instructions. For the ground beams	M3	3.0		
<b>24.3.8</b>	Supply and Cast Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include shuttering, reinforcing and all related works according to drawings and specifications and engineer instructions. For the columns	M3	2.0		
<b>24.3.9</b>	Supply and Cast 10 cm of Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include shuttering, reinforcing, painting with two coats of hot bitumen (75/25) (for the buried parts) and all related works according to drawings and specifications and engineer instructions. For the slab on grade	M2	16.0		
<b>24.3.10</b>	Supply and Cast 20 cm Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include shuttering, reinforcing, painting with two coats of hot bitumen (75/25) (for the buried parts) and all related works according to drawings and specifications and engineer instructions. For the solid slab including beams and drop beams	M2	16.0		
<b>24.3.11</b>	Supply & apply Special Concrete Screed to Roof, cast to falls not less than 40 mm at drain. Thickness in the lower point as shown on detailed drawings with smooth surface finish. Price also includes Plain Cast in Place Concrete Grade 'B-200' hunching and lining to all edges of roof screed and parapet, with slope 1: 1 to minimum height of 20 cm. All to comply with specifications and Engineers directions.  To be applied to the roof	m2	18.0		
<b>24.3.12</b>	Supply and Cast blind Concrete Grade 'B 250'. With a minimum cement content of 300 Kg. per cubic meter under foundations and ground beams etc. Ten (10) cm. thick. Including surface leveling, finishing and all related works.	m2	18.0		
<b>24.3.13</b>	Supply and Cast Reinforced Concrete Grade 'B 250'. With a minimum cement content of 300 Kg. per cubic meter For ground slab. Ten (10) cm. thick. Including surface leveling, finishing, polyethylene sheets 200 micron, construction joints and all related works.  For the Slab on Grade and surrounding areas	m2	20.0		

<b>24.3.14</b>	Supply and Build Concrete Block Walls, 'Grade 35' of any size blocks single or cavity . the measurements will be to one side only all done according to the dwg. specifications and Engineer instructions and approval. Hollow blocks 20 cm thick for the walls of the toilet. Price shall also include Supply and Cast Reinforced Concrete Grade 'B250 With a minimum cement content of 300 Kg. per cubic meter. Price also to include shuttering, reinforcing 4Ø10 and stirrups 1Ø8@25cm, and all related works according to drawings and specifications and engineer instructions. For the beams 20cmX 20cm above Hollow blocks	M <sup>2</sup>	22.0		
<b>24.3.15</b>	Supply and Build Concrete Block Walls, 'Grade 35' of any size blocks single or cavity. The measurements will be to one side only all done according to the dwg. specifications and Engineer instructions and approval. Hollow blocks 10 cm thick for the partition walls. Price shall also include Supply and Cast Reinforced Concrete Grade 'B250 With a minimum cement content of 300 Kg. per cubic meter. Price also to include shuttering, reinforcing 4Ø10 and stirrups 1Ø8@25cm ,and all related works according to drawings and specifications and engineer instructions. For the beams 20cmX 10cm above Hollow blocks	M <sup>2</sup>	7.0		
<b>24.3.16</b>	supply and install two Coats of Cement and Sand Plaster over one slurry coat to walls and ceilings and where required for External plastering. price include Waterproofing additive (W 290) with the second and last face and painting with standard approved color Waterproofing supercyl for External walls of the existing structure at the entrance. Price to also include 2 coats of external painting (supercryle). To the toilets.	M <sup>2</sup>	48.0		
<b>24.3.17</b>	Supply and paint three coats polycide paint for ceilings including corridor ceilings of high quality (Approved by Palestine Standards Institution) and by the supervision engineer.	M <sup>2</sup>	14		
<b>24.3.18</b>	Supply and paint high quality emulsion paint, for top walls and internal drop beams (sides and bottom), on one priming coat and two finishing coats, using two coats of complete putty, as per satisfaction of the supervisor engineer.	M <sup>2</sup>	12		
<b>24.3.19</b>	Supply & paint three coats of external quality waterproofing supercryle paint for Corridors (walls) and parapet wall according to drawings and specifications.	M <sup>2</sup>	22		
<b>24.3.20</b>	Supply and Fix Factory-made Steel Doors as per drawings, specification. Price to include frame (door) (as per details), fixing completely, ironmongery, cylinders, cylindrical locks handles (Approved by Palestine Standards Institution). 6 mm. glazing, gaskets, oil Paint in three coats in addition to two primer coats. A 40cm x 40cm sign made of Metal shall be fixed on the door. The sign should be colored and the icon and writing to be assigned by the supervision engineer, Dimensions: as per drawings	No.	1		
<b>24.3.21</b>	Supply and Install Non-Slip Colored Ceramic Floor Tiles Thickness 0.6 cm. First choice and free from all defect grade "A". (Approved by Palestine Standards Institution). Price to include sand with cement filling (Grade B-100), pointing with white cement and cleaning on site, removal of the old tiles, leveling and all the necessary work to complete the job in accordance with the instructions of the supervision engineer.	M <sup>2</sup>	14		
<b>24.3.22</b>	Supply and Install White Glazed or colored Ceramic Wall Tiles Thickness 0.6 cm, First choice European type and free from all defects Grade "A". (Approved by Palestine Standards Institution). Price to include white round aluminum edges patching around services. Two coats of epoxy pointing ..All works shall be in accordance with drawings and specifications.	M <sup>2</sup>	45		

<b>24.3.23</b>	Supply and Fix Wooden Doors 4.5 cm Thick single or double sashes. With (Frame).(4.5*3.5) cm hardwood (Zan) edging and (3.5*9.5) cm soft wood stile. Edge strip banding of width 4.5 mm. Formica over veneer on both sides, color for frames and Architrave as directed by engineer. Door paneling to be soft wood 4.5*3.5 cm. each 4 cm., frames of galvanized steel sheet frame of 2mm thick for corridor doors ( as per drawings), width according to the wall thickness' and Allowance of 4 - 6 cm. thickness for plastering and tiling purposes, immersed in wood preservative before erection then embedded completely in sand - cement mortar and completely anchored as per specification. Architrave of Hardwood (Swedish)(4*1.2)cm, price to include ironmongery, kick plates of aluminum 20cm height from one side for main bath room doors, U shaped 10cm height from both sides at the bottom for internal doors kick plates of aluminum 20cm height for bath room doors, U shaped both sides, and at the bottom door stoppers, transparent fiber glass 6mm thick for both upper vision panel & for vision panel inside door leaf, gaskets cylindrical Lock ((Approved by Palestine Standards Institution), and painting in three coats of oil paint in addition to primer coat. Price includes also aluminum louvers of 50x60cm in the bottom for store doors. All as per Detailed Drawings, specification. Size as per drawings	No.	3		
<b>24.3.24</b>	Supply, fix and operate non sliding Aluminum Windows extrusion Section 7700 or equal, with protective electrostatic applied polyester powder paint of 70-80 microns. In color of bronze. Price to include 6.38mm thick laminated glass (3+0.38+3mm) for double glass. float glazing and all other accessories and fittings to complete works as per drawings and specifications. Price shall include the steel protection from outside made of steel frame and steel wire mesh. Price shall also include painting, fixing etc.	M2	1.0		
<b>24.3.25</b>	Supply and apply app waterproofing membrane of bitumen rolls. (4 mm. of reinforced polyester sheets) covered with layer of white chipping, over roof slab and around parapets with overlaps of not less than 10 cm. Price to include primer coats of approval source according to specifications and engineer's instructions.	M <sup>2</sup>	14		
<b>24.3.26</b>	Supply and install Local marble threshold for under Doors and under windows 3-4 cm thickness	m2	3		
<b>24.3.27</b>	Supplying of all required materials, casting and erecting reinforced concrete RETAINING WALL (including footing and wall body) composed of (B 350) concrete and steel Reinforcement with yield stress (fy=4200kg/cm2), Price shall include, but not limited to structural excavation and structural backfilling with friction angle of 30 degrees behind retaining walls and wing walls, 10cm blinding B200, 4 inches drainage pipe and expansion joints every 20m and where needed, tar or bituminous painting to surfaces permanently in contact with backfilled material and base course (40cm) under footings compacted on two layers 20 cm each. All according to specifications, drawings, and directions of the Engineer. Price to also include parapet wall as per drawings. Price shall include all the necessary work as per the drawings including all the above.	m3	16		
<b>24.3.28</b>	Supplying of all required materials, casting and erecting reinforced concrete STAIRS composed of (B 350) concrete and steel Reinforcement with yield stress (fy=4200kg/cm2), Price shall include, but not limited to structural excavation (if needed) and structural backfilling (if needed), 10cm blinding B200, ituminous painting to surfaces permanently in contact with backfilled material and base course (40cm) under stairs compacted on two layers 20 cm each. All according to specifications, drawings, and directions of the Engineer. Price to also include parapet wall as per drawings. Price shall include all the necessary work as per the drawings including all the above.	m3	3.5		
<b>B. Electrical Works</b>					

	<p>Preamble: All Supplied Materials Should be Local Made (if available), Grade A and Free From Defects, Having Supervisor Certificate From Palestinian Standard Institution (PSI).</p> <p>Price to include submittal and obtaining approval of shop drawings, detailed and as-built drawings for all works as well as coordinating the same with the other services, activities and furniture.</p> <p>Price to include, also, submittal of catalogues and manufacturer instruction.</p> <p>Fixtures and appliances shall be measured in number. Supply and feeder Cables, cable conduits and cable trays shall not be measured but included in DB's prices</p> <p>Manholes, handholds and the like shall be measured in number. All Systems and devices shall be in lump sum including installation, testing and commissioning.</p> <p>Rates of fixtures and appliances shall include installation, wiring, switches and conduit works.</p> <p>All systems equipment (Class A and approved by Palestine Standards Institution)</p>				
23.3.29	<p><b>Lighting points</b></p> <p>Supply, Install and Connect Lighting Points including fire proof boxes fire proof Conduits, fire retardant (E90) 3*1.5 mm2 cables and 5*1.5mm2 for emergency kits, Light Switches, and all accessories as per drawings and specifications. Price to also include any necessary painting or tiling after connecting the points.</p>	SET No.	4		
23.3.30	<p><b>Lighting fixtures</b></p> <p>Supply, Install and Connect the following high frequency control gear Lighting Fixtures including P.F. correction capacitors, Lamps, installation for all lighting fixtures using galvanized iron chains to suspend the fixtures in the ceiling and all accessories as per drawings and specifications. Supply and install Surface mounted globe 13.5W/1100lm with metal based and opal diffuser, IP65.</p>	SET No.	4		
23.3.31	<p><b>Main Electrical Connection</b></p> <p>Supply, Install and Connect 5x6mm2 XLPE cable include 1Φ1.5" PVC conduit from MDB to the new Unit. Price shall also include excavation, any necessary painting, plastering or tiling after connecting the points.</p>	L.M	50		
<b>C. Mechanical Works</b>					
	<p>Preamble. Supply networks pipes To Tanks, or from on roof feeding tanks to collectors shall be priced in Linear meter. Water tanks shall be measured in number. , Sanitary Fixtures shall be measured in number, price to include cold and hot water pipes supply and fittings to collectors, also to include drain supply , fittings connection, to manholes. Drains, Floor Traps, Clean outs and the like shall be measured in number.</p> <p>Internal sanitary sewers network shall be included in the rates of sanitary fixtures and appliances. and the sanitary fixtures includes the cost of poexgol pipes for basins, toilets, science lab basins, home economics basins, ..etc., price also includes the connection to drainage network of these fixtures in sanitary units and labs. Vents and vertical stacks shall measured in linear meter. Manhole, Galleys and the like shall be measured in number. External sewers pipes shall be measured in linear meter for each individual diameter and material. Rates of all fittings , fixtures , appliances and pipe laying shall include:- Supply of material, workmanship, installation, testing and commissioning. Rates to include also all peace's and fittings, including by passes , floats, cleaning outlets , automatic vents, vents and stack covers, valves and non return valves and the like needed to complete works as per specifications. Insulation and painting as called for in specifications. Excavation and cutting for all pipe laying works, bedding back filling and all works connected with pipe laying. All ties, sleeves, joints, tie bolts and rods, brackets and the like. Rates to include Workshops, Coordinated and as- built drawings as approved by the Engineer. , the contractor should submit best quality, approved two brands for each mechanical works items for approval, and should be approved by PSI, any cut in blocks for installations should be done using special cutting machine, (all mechanical materials as sanitary fixtures fixtures, devices should be Italy made, Germany, Spanish made or equivalent )</p>				

<b>23.3.28</b>	Supply and install Arabic style and Supply & Install Porcelain W.C. bowl class "A" white or coloured , (Italy, Spanish made or equivalent) with heavy duty seat and cover. Price includes plastic flush tank, hanging iron steel bracket, bolts and nuts, as well as flexible flush hose , valve, porcelain paper holder, connection to pexogol pipe, connection to drainage and all related materials. Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include complete removal of the old toilets, replacement of any broken tiles, broken valves and then supplying new Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings as per specifications , drawing and as directed by supervision engineer.	Complete Set	3		
<b>23.3.32</b>	Supply & Install Porcelain wall hung wash basin white or colored engineer of size 50 x 45 cm of approved brand (Italy, Spanish made or equivalent), Price shall include chromium plated mixer with chromium plated handle mounted on wall. the price also includes connection to Pexogol pipe, liquide soap holder , and all fixation and hanging bracket. Price includes supplying and installing 40x60cm mirror., semi pedestal and all other required materials, including connection to drainage system.	Complete Set	2		
<b>23.3.33</b>	Supply and install 6" UPVC pipes SN8 heavy duty, at least (4.9mm) thick, Local Made or equal and must be approved by Palestine Standard Institution, between manholes in with all required materials, sockets, fittings , rubber seals, elbow, etc. The price includes excavation ,backfilling of at least 15 cm sand above , below and around the pipes including back-filling of selected material above the sand, and disposal of surplus excavated materials. Excavation shall be to any depth, width, and in any type of soil or rock, connection for internal sewerage network to connect to existing or proposed new sewage network or the septic tank and insulation of septic tank wall after connection.	L.M	10		
<b>23.3.34</b>	ditto as 1.3.28 but 4" UPVC SN 4 pipes including vent caps with filters	L.M	12		
<b>23.3.35</b>	ditto as 1.3.28 but 2" UPVC pipes	L.M	8		
<b>23.3.36</b>	Supply and install 4" galvanized vertical pipes heavy duty for rain water, Local Made or equal and must be approved by Palestine Standard Institution. Price includes digging for pipes, supports, hangers , and all rubber joints and sealants, and rainwater pipe end outlets from roof to ground.	L.M	6		
<b>23.3.37</b>	Heavy duty stainless steel 4" floor drain syphon trap with screw type screen and with closed covers for urinals , all of approved brand , complete with all required fittings and connections using reduced "T" for connecting sanitary fixtures, the traps in stairs to be with closed cover	No	5		
<b>23.3.38</b>	Supply and Install of Precast Concrete Manholes with minimum 15cm wall thickness for sewage and storm water drainage In compliance with specifications and Drawings. Price shall include excavation to any depth according to slopes, B200 reinforced concrete for base, back filling, cement plaster, benching, 8 or 25Ton Cast Iron cover as indicated , drop if needed, and all necessary works. all as shown in drawings, specifications, and approval of supervisor engineer. a. Ø60cm, 8 ton C.I cover	NO.	2		

<b>23.3.39</b>	Supply and install wall/window type exhaust fans of approved manufacture (European type or equal) complete with self – act automatic shutter. Price includes galvanized ducts, grills, shutter and making necessary holes in walls or glass and fixing, and wiring cables all as per specifications, and approval of supervisor engineer. The fan shall have it is own electrical wiring inside walls or ceiling, one socket/key etc. The price shall include any excavation, painting, plastering etc. all as shown in drawings, specifications, and approval of supervisor engineer. Extract Fan, 100 CFM	No.	1		
<b>23.3.40</b>	Supply and Install Polyethylene White, domestic Water Tank. Capacity 1500 lit. "With Quality approval Tag" Including well painted steel balustrade support , automatic copper float valve, isolating valves, drain valve, fittings, vents, screwed cover, piping and connections till main cold water piping and all accessories; all according to the engineers' instructions and approval, the mounting of the tanks should be according to details including special bracing and flexible connections, painted steel base and what is required to complete the work. The price shall also include Steel structure with 2 meter high to carry the tank safely.	No.	1		
<b>23.3.41</b>	Supply, install and test Copper Collectors 3/4" dia., of approved brand. Price shall include all openings (eyes), and shall include for the required copper adaptors, hangers, supports, ties, air vents. Collectors shall be installed on walls, as shown on drawings. The work shall be completed as specified and according to the Engineer's instructions.	eye	8		
<b>Total Al Zeef Preparatory Boys School (NIS)</b>					



BILLS OF QUANTITIES					
CONSULTANT: Universal Group for Engineering and Consulting			DATE: March 2023		
Wadi Al Seeq Preparatory Co-ed School					
ITEM No.	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (ILS)	AMOUNT (ILS)
25.1	Preliminary Items				
25.1.1	Supply and installation of the project marble sign (110 cm x 70cm) that include colored project information. The Contractor shall do the design and fix the sign as per the supervision engineer instructions. The price shall include fixing the sign properly with all required drilling, jumboo bolts, rehabilitation of any damages occurred during fixation.	No.	1		
25.2	External Works				
25.2.1	<u>Repair of Existing Sandwich panel roof</u> Allow for every work and cost to Repair of Existing Sandwich panel roof using sealant materials to reapiir the roof at several locations (bolts, joints, weak points etc.) and prevente rain leakage.	L.S	1		
25.2.2	<u>Supply and Install Solar Panels Batteries</u> Supply, install, connect, test and operate eight sealed lead acid batteries 100Ah (or any combination to generate 400 Ah at 24V) deep cycle discharge solar type with a permissible related death of discharge without damage with: * 24 Volt operating voltage of 2 elements of 12 Voltws or equivalent * 100 Ah at C20. * Minimum 1,100 cycles at 50% depth of charge (25 Celsius and 10 hours discharge rate). * Gel battery, free maintenance. * Battery compatible with global standards, IEC60896-2 and international certficates, UL, CE or equivalent. * Self-discharge of 3% permonth at 25 Celsius> * Suitable battery terninal connectors (according to the factory instruction). * the datasheet must cover all technical specifications includeing: Cucle life versus depth of discharge, Self discharge characteristics, physical size and weight, details of material used in construction and saftey warnings. * The batteries must have a minimum of 3 years repalcment warranty.	No.	8		
25.2.3	<u>Awning Works (conditional)</u> Supply and install steel awning at one location or several location as per the detail in the drawing and as per supervision engineer. The price shall also include all steel tubes (columns, horizontal, vertical etc.), steel corrugated sheets, drain gutters, steel bolts, excavation, backfilling, reinforced concrete foundations, reinstatement, 3 Inch galvanized Steel rain water, painting, the fixation, joints, angles and whatever necessary to complete the work in accordance with the drawings, specifications and to the approval of the supervision engineer. Price to include any required works including but not limited to, sealant works, fixing, fastening, welding etc. The Hight of the awning as per drawings or 3.5 meter if not mentioned. The final location or several locations of awning will be fixed during the shop drawing phase and as instructed by the supervision engineer, the Contractor shall not claim for additional cost or object.	m2	25		
25.2.4	<u>outside Tiles Works (conditional)</u> Supply and Install Non-Slip Coloured Ceramic Floor Tiles Thickness 0.6 cm. First choice and free from all defect grade "A". (Approved by Palestine Standards Institution). Price to include sand with cement filling (Grade B-100), pointing with white cement and cleaning on site, removal of the old tiles, levelling and all the necessary work to complete the job in accordance with the instructions of the supervision engineer.	M <sup>2</sup>	25		
25.3	Supply and Installation of New WASH unit (Removable Structure)				
A. Civil Works					

25.3.1	<p>Site clearance of any type of stairs, reinforced concrete, trees, branches, rocks, etc. in order to start the work. While keeping the trees intact and safe in order to re-plant the trees in a suitable place in accordance with the supervision engineer and to his approval.</p>	L.S	1.0		
25.3.2	<p>Supply, connect and operate Mobile Latrines according to drawings and following specifications:  with a whole area of 1.52 m<sup>2</sup> and dimensions of (1.18*1.29) m<sup>2</sup> taking into consideration the following specifications:  (as per picture), the price includes:</p> <ul style="list-style-type: none"> <li>• External walls: silver or white colour for galvanized double steel sheets 0.5 mm insulated with 5 cm Kalkal boards; dimensions (118*200*5) cm, each wall side should be of one board (no connections).</li> <li>• All corners of the latrine walls should be gathered with L galvanized steel angles; dimensions (5*5*0.125) cm from inside, (10*10*0.125) cm from outside and (5*5*0.125) cm to link walls to floor, and 10*5*10*0.125 for the edges, fixed by special screws and elastic sealing rubber, to prevent water leakage, with distances according to the Engineer instructions and approval.</li> <li>• Ceiling: consisting of 2 mm thick galvanized steel sheets supported with 4x4x0.15 cm galvanized steel profile and fixed to the walls according to the drawings.</li> <li>• Latrine floor: 3 mm steel sheet "mobazar". The steel sheet should be fixed by welding, covered with 5 mm thickness of plastic water-resistant layer (PVC) of Italian type, sealed with silicon and tape 5-7 cm height on internal side continuously with the ground sheet to ensure an adequate seal. Steel profiles 30 cm length; the supporting profiles 5*5 and 4*4 cm, 0.15 thickness should be fixed by welding as mentioned in the drawings</li> </ul> <ul style="list-style-type: none"> <li>• White aluminium window (45*45) cm<sup>2</sup> of class A section 4000. Window glass is 4mm thick, wired chipped type (mobazzar) with a fixed external mosquito net; treated where needed with silicon sealant</li> <li>• Door: door should be of the same as the wall material (5 cm Kalkal board), with galvanized steel handles and internal and external locks. All necessary fixing frames according to the drawings.</li> <li>• Porcelain W.C. bowl class "A" white or coloured.</li> <li>• Water tap of type Chrome (long neck), 2 items-one for the basin, and the second for water outlet point. White Basin of type HARSA, (38*45) cm or equivalent.</li> <li>• Piping works, connecting 4" PVC pipes, one for sewage, to connect the latrine sewer to the fixed cesspit tank (drilled barrel) or-( available sewer system in the area only if approved by the engineer) with correct distance of maximum 3 meters length. A second 4" PVC pipe for ventilation should be fixed, where ventilations pipes are rising vertically 20 cm from the latrine roof; covered with meshed plastic cap.</li> <li>• Connecting 2"PVC discharge pipes for wastewater from the washbasins.</li> <li>• Galvanized tin water tank of 24 liters capacity, with (0.4*0.2*0.3) m, and 1.5 mm thickness, prepared with water float and connected to the water source.</li> <li>• All necessary pipelines and fittings to ensure that the water supply, sewer and drainage systems all work correctly. Use ½" steel pipes for internal connections, and connection between the water inlets in the latrine to the available water source (water tank or water network) with HDPE pipes of the required length to ensure correct water pressure flow.</li> <li>• Steel barrel with drilled holes; a proportion of the base removed to be fixed and buried at least 2.0 m from the latrine, with 1/4 m<sup>3</sup> capacity and of 1.5 mm thickness to be used for drainage.</li> <li>• Steel skeleton works: galvanized steel profile welded correctly and painting of the welding lines with Anti Rust paint as follows:</li> <li>• Floor supporting profiles: (5*5) cm, &amp; 0.15cm thickness, and 4*4 cm, 0.15 cm thickness for the cross supporting.</li> <li>• Ceiling supporting profiles: (4*4) cm, &amp; 1.5 mm thickness.</li> <li>• Latrine legs: (5*5*38) cm L section with 3 mm thickness welded to Steel plate 10*10*0.3 cm</li> </ul>	No.	2		

	<ul style="list-style-type: none"> <li>• Fixing latrines: fixation of mobile latrine legs to ground with steel angles bolted to the legs. The steel angle used should be chamfered from the bottom for easier penetration of the ground; dimensions (5*5) cm and 3 mm thickness. The angle length of 60 cm, hammered into ground and welded/bolted to the latrine legs (if rocky ground is available jumbo screws can be used for the support fixation to the ground), two B-250 concrete belt of 15*20cm should be cast between latrine legs. All should be inline and according to the Engineer instructions and approval. Also concrete step should be casted with width 0.3 and depth 0.15 at the entrance of the latrines.</li> <li>• Welding should be of CO2 method, implemented in lines (not point welds), wherever an intersection line exists between the different steel sections. The welding line should be painted with a similar color to the profiles, using a rust resistance paint of National type.</li> <li>• The tenderer shall prepare one Mobile latrines as a prototype for approval.</li> </ul>				
<b>25.3.3</b>	<p>Dito as in 25.3.2 but for Supply, connect and operate Mobile Latrines according to drawings and as the previous specifications but suitable in specifications and are for handicap with a whole area of 4.75 m2 and dimensions of (2.5*1.6)m2 taking into consideration all the previous specifications and the attached drawings for the handicap mobile latrines. The Toilet should be White Vitreous China European type Toilet (Class A and approved by Palestine Standards Institution) Complete with European made flush valve, fittings, including all the required tools to assist the disabilities for movements as mentioned in the drawings. The wash basin White Vitreous China Wash Basin (Class A and approved by Palestine Standards Institution), size (40*56) cm suitable for disabilities.</p>	No.	1.0		
<b>25.3.4</b>	<p>Supply and Install Polyethylene White, domestic Water Tank. Capacity 1500 lit. "With Quality approval Tag" Including well painted steel balustrade support , automatic copper float valve, isolating valves, drain valve, fittings, vents, screwed cover, piping and connections till main cold water piping and all accessories; all according to the engineers' instructions and approval, the mounting of the tanks should be according to details including special bracing and flexible connections, painted steel base and what is required to complete the work. The price shall also include Steel structure with 2 meter hight to carry the tank safely.</p>	No.	2		
<b>Total Wadi Al Seeq Preparatory Co-ed School (NIS)</b>					

BILLS OF QUANTITIES					
CONSULTANT: Universal Group for Engineering and Consulting			DATE: March 2023		
Al Tahadi Preparatory co-ed School					
ITEM No.	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (ILS)	AMOUNT (ILS)
25.1	Preliminary Items				
25.1.1	Supply and installation of the project marble sign (110 cm x 70cm) that include colored project information. The Contractor shall do the design and fix the sign as per the supervision engineer instructions. The price shall include fixing the sign properly with all required drilling, jumbo bolts, rehabilitation of any damages occurred during fixation.	No.	1		
25.2	External Works				
25.2.1	Supply, install, connect, test and operate eight sealed lead acid batteries 100Ah (or any combination to generate 400 Ah at 24V) deep cycle discharge solar type with a permissible related death of discharge without damage with: * 24 Volt operating voltage of 2 elements of 12 Voltws or equivalent * 100 Ah at C20. * Minimum 1,100 cycles at 50% depth of charge (25 Celsius and 10 hours discharge rate). * Gel battery, free maintenance. * Battery compatible with global standards, IEC60896-2 and international certificates, UL, CE or equivalent. * Self-discharge of 3% permonth at 25 Celsius> * Suitable battery terminal connectors (according to the factory instruction). * the datasheet must cover all technical specifications includeing: Cucle life versus depth of discharge, Self discharge characteristics, physical size and weight, details of material used in construction and saftey warnings. * The batteries must have a minimum of 3 years repalcment warranty.	No.	8		
25.2.2	<b>Awning Works (conditional)</b> Supply and install steel awning at one location or several location as per the detail in the drawing and as per supervision engineer. The price shall also include all steel tubes (columns, horizontal, vertical etc.), steel corrugated sheets, drain gutters, steel bolts, excavation, backfilling, reinforced concrete foundations, reinstatement, 3 Inch galvanized Steel rain water, painting, the fixation, joints, angles and whatever necessary to complete the work in accordance with the drawings, specifications and to the approval of the supervision engineer. Price to include any required works including but not limited to, sealant works, fixing, fastening, welding etc. The Hight of the awning as per drawings or 3.5 meter if not mentioned. The final location or several locations of awning will be fixed during the shop drawing phase and as instructed by the supervision engineer, the Contractor shall not claim for additional cost or object.	m2	25		
25.3	Supply and Installation of New WASH unit (Removable Structure)				
A. Civil Works					
25.3.1	Site clearance of any type of stairs, reinforced concrete, trees, branches, rocks, etc. in order to start the work. While keeping the trees intact and safe in order to re-plant the trees in a suitable place in accordance with the supervision engineer and to his approval.	L.S	1.0		

<p><b>25.3.2</b></p>	<p>Supply, connect and operate Mobile Latrines according to drawings and following specifications: with a whole area of 1.52 m2 and dimensions of (1.18*1.29) m2 taking into consideration the following specifications: (as per picture), the price includes:</p> <ul style="list-style-type: none"> <li>• External walls: silver or white colour for galvanized double steel sheets 0.5 mm insulated with 5 cm Kalkal boards; dimensions (118*200*5) cm, each wall side should be of one board (no connections).</li> <li>• All corners of the latrine walls should be gathered with L galvanized steel angles; dimensions (5*5*0.125) cm from inside, (10*10*0.125) cm from outside and (5*5*0.125) cm to link walls to floor, and 10*5*10*0.125 for the edges, fixed by special screws and elastic sealing rubber, to prevent water leakage, with distances according to the Engineer instructions and approval.</li> <li>• Ceiling: consisting of 2 mm thick galvanized steel sheets supported with 4x4x0.15 cm galvanized steel profile and fixed to the walls according to the drawings.</li> <li>• Latrine floor: 3 mm steel sheet" mobazar". The steel sheet should fixed by welding, covered with 5 mm thickness of plastic water-resistant layer (PVC) of Italian type, sealed with silicon and tape 5-7 cm height on internal side continuously with the ground sheet to ensure an adequate seal. Steel profiles 30 cm length; the supporting profiles 5*5 and 4*4 cm, 0.15 thickness should be fixed by welding as mentioned in the drawings</li> </ul> <ul style="list-style-type: none"> <li>• White aluminium window (45*45) cm2 of class A section 4000. Window glass is 4mm thick, wired chipped type (mobazzar) with a fixed external mosquito net; treated where needed with silicon sealant</li> <li>• Door: door should be of the same as the wall material (5 cm Kalkal board), with galvanized steel handles and internal and external locks. All necessary fixing frames according to the drawings.</li> <li>• Porcelain W.C. bowl class "A" white or coloured.</li> <li>• Water tap of type Chrome (long neck), 2 items-one for the basin, and the second for water outlet point. White Basin of type HARSA, (38*45) cm or equivalent.</li> <li>• Piping works, connecting 4" PVC pipes, one for sewage, to connect the latrine sewer to the fixed cesspit tank (drilled barrel) or-( available sewer system in the area only if approved by the engineer) with correct distance of maximum 3 meters length. A second 4" PVC pipe for ventilation should be fixed, where ventilations pipes are rising vertically 20 cm from the latrine roof; covered with meshed plastic cap.</li> <li>• Connecting 2"PVC discharge pipes for wastewater from the washbasins.</li> <li>• Galvanized tin water tank of 24 liters capacity, with (0.4*0.2*0.3) m, and 1.5 mm thickness, prepared with water float and connected to the water source.</li> <li>• All necessary pipelines and fittings to ensure that the water supply, sewer and drainage systems all work correctly. Use ½" steel pipes for internal connections, and connection between the water inlets in the latrine to the available water source (water tank or water network) with HDPE pipes of the required length to ensure correct water pressure flow.</li> <li>• Steel barrel with drilled holes; a proportion of the base removed to be fixed and buried at least 2.0 m from the latrine, with 1/4 m3 capacity and of 1.5 mm thickness to be used for drainage.</li> <li>• Steel skeleton works: galvanized steel profile welded correctly and painting of the welding lines with Anti Rust paint as follows:</li> <li>• Floor supporting profiles: (5*5) cm, &amp; 0.15cm thickness, and 4*4 cm, 0.15 cm thickness for the cross supporting.</li> <li>• Ceiling supporting profiles: (4*4) cm, &amp; 1.5 mm thickness.</li> <li>• Latrine legs: (5*5*38) cm L section with 3 mm thickness welded to Steel plate 10*10*0.3 cm</li> </ul>	No.	2		
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	<ul style="list-style-type: none"> <li>• Fixing latrines: fixation of mobile latrine legs to ground with steel angles bolted to the legs. The steel angle used should be chamfered from the bottom for easier penetration of the ground; dimensions (5*5) cm and 3 mm thickness. The angle length of 60 cm, hammered into ground and welded/bolted to the latrine legs (if rocky ground is available jumbo screws can be used for the support fixation to the ground), two B-250 concrete belt of 15*20cm should be cast between latrine legs. All should be inline and according to the Engineer instructions and approval. Also concrete step should be casted with width 0.3 and depth 0.15 at the entrance of the latrines.</li> <li>• Welding should be of CO2 method, implemented in lines (not point welds), wherever an intersection line exists between the different steel sections. The welding line should be painted with a similar color to the profiles, using a rust resistance paint of National type.</li> <li>• The tenderer shall prepare one Mobile latrines as a prototype for approval.</li> </ul>				
<b>25.3.3</b>	<p>Dito as in 25.3.2 but for Supply, connect and operate Mobile Latrines according to drawings and as the previous specifications but suitable in specifications and are for handicap with a whole area of 4.75 m2 and dimensions of (2.5*1.6)m2 taking into consideration all the previous specifications and the attached drawings for the handicap mobile latrines. The Toilet should be White Vitreous China European type Toilet (Class A and approved by Palestine Standards Institution) Complete with European made flush valve, fittings, including all the required tools to assist the disabilities for movements as mentioned in the drawings. The wash basin White Vitreous China Wash Basin (Class A and approved by Palestine Standards Institution), size (40*56) cm suitable for disabilities.</p>	No.	1.0		
<b>25.3.4</b>	<p>Supply and Install Polyethylene White, domestic Water Tank. Capacity 1500 lit. "With Quality approval Tag" Including well painted steel balustrade support , automatic copper float valve, isolating valves, drain valve, fittings, vents, screwed cover, piping and connections till main cold water piping and all accessories; all according to the engineers' instructions and approval, the mounting of the tanks should be according to details including special bracing and flexible connections, painted steel base and what is required to complete the work. The price shall also include Steel structure with 2 meter high to carry the tank safely.</p>	No.	2		
<b>Total Al Tahadi Preparatory co-ed School (NIS)</b>					

BILLS OF QUANTITIES					
CONSULTANT: Universal Group for Engineering and Consulting			DATE: March 2023		
Al Farouq Preparatory Boys					
ITEM No.	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (ILS)	AMOUNT (ILS)
27.1	Preliminary Items				
27.1.1	Supply and installation of the project marble sign (110 cm x 70cm) that include coloured project information. The Contractor shall do the design and fix the sign as per the supervision engineer instructions. The price shall include fixing the sign properly with all required drilling, jumboo bolts, rehabilitation of any damages occurred during fixation.	No.	1		
27.1.2	Demolishing works inside the WASH facilities (WCs) that intersects with the designed structure in accordance with the drawings. The price shall include remove all demolished materials to approved locations outside the schools as per the supervision engineer instructions. Price also include Remove carefully works inside the WASH facilities (WCs). The price shall include but not limited to remove carefully, main doors, WC doors, sinks, tiles, wash basins, lighting Points, Collectors, accessories, taps, etc. all as per drawings, and Engineer instructions. The Contractor shall transport all removed materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
27.1.3	<u>Door and windows Opening in Reinforced Concrete and/or natural stone and /or Hollow Block</u> Allow for every expenses to make a door opening in RE concrete wall. The price shall also include all needed works to complete the works as per drawings, specifications and engineer instructions. The Contractor shall transport all removed materials to approved locations outside the schools as per the supervision engineer instructions. Price also include close the internal door between the student WC and teachers with Blocks.	L.S	1		
27.1.4	<u>Reduce the level of the toilets</u> Allow for every expenses to reduce the levels of the toilets to be as per specifications. The price shall also include all needed works to complete the works as per drawings, specifications and engineer instructions. The Contractor shall transport all removed materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
27.2	External Works				
27.2.1	<u>Awning Works</u> Supply and install steel awning at one location or several location as per the detail in the drawing and as per supervision engineer. The price shall also include all steel tubes (columns, horizontal, vertical etc.), steel corrugated sheets, drain gutters, steel bolts, excavation, backfilling, reinforced concrete foundations, reinstatement, 3 Inch galvanized Steel rain water, painting, the fixation, joints, angles and whatever necessary to complete the work in accordance with the drawings, specifications and to the approval of the supervision engineer. Price to include any required works including but not limited to, sealant works, fixing, fastening, welding etc. The Hight of the awning as per drawings or 3.5 meter if not mentioned. The final location or several locations of awning will be fixed during the shop drawing phase and as instructed by the supervision engineer, the Contractor shall not claim for additional cost or object.	m2	25		

<b>27.3</b>	<b>Rehabilitation of existing WASH units</b>				
<b>A. Civil Works</b>					
<b>27.3.1</b>	Supply and Build Concrete Block Walls, 'Grade 35' of any size blocks single or cavity. The measurements will be to one side only all done according to the dwg. specifications and Engineer instructions and approval. Hollow blocks 10 cm thick for the partition walls. Price shall also include Supply and Cast Reinforced Concrete Grade 'B250 With a minimum cement content of 300 Kg. per cubic meter. Price also to include shuttering, reinforcing 4Ø10 and stirrups 1Ø8@25cm, and all related works according to drawings and specifications and engineer instructions. For the beams 20cmX 10cm above Hollow blocks	M <sup>2</sup>	50.0		
<b>27.3.2</b>	Supply and paint three coats polycide paint for ceilings including corridor ceilings of high quality (Approved by Palestine Standards Institution) and by the supervision engineer.	M <sup>2</sup>	81		
<b>27.3.3</b>	Supply and Fix Factory-made Steel Doors as per drawings, specification. Price to include frame (door) (as per details), fixing completely, ironmongery, cylinders, cylindrical locks handles (Approved by Palestine Standards Institution). 6 mm. glazing, gaskets, oil Paint in three coats in addition to two primer coats. A 40cm x 40cm sign made of Metal shall be fixed on the door. The sign should be coloured and the icon and writing to be assigned by the supervision engineer, Dimensions: 1m *2.0m	No.	2		
<b>27.3.4</b>	Supply and Install Non-Slip Coloured Ceramic Floor Tiles Thickness 0.6 cm. First choice and free from all defect grade "A". (Approved by Palestine Standards Institution). Price to include sand with cement filling (Grade B-100), pointing with white cement and cleaning on site, removal of the old tiles, levelling and all the necessary work to complete the job in accordance with the instructions of the supervision engineer.	M <sup>2</sup>	82		
<b>27.3.5</b>	Supply and Install White Glazed or coloured Ceramic Wall Tiles Thickness 0.6 cm, First choice European type and free from all defects Grade "A". (Approved by Palestine Standards Institution). Price to include white round aluminium edges patching around services. Two coats of epoxy pointing ..All works shall be in accordance with drawings and specifications. Price shall include removal of existing Wall Tiles.	M <sup>2</sup>	220		
<b>27.3.6</b>	Supply, fix and operate non sliding Aluminium Windows extrusion Section 7700 or equal, with protective electrostatic applied polyester powder paint of 70-80 microns. Price to include 6.38mm thick laminated glass (3+0.38+3mm) for double glass. float glazing and all other accessories and fittings to complete works as per drawings and specifications. Price shall include the steel protection from outside made of steel frame and steel wire mesh. Price shall also include painting, fixing etc. Price shall also include repair and replace what is damaged of the tehcer windows which consist of blade type glass with wires.	M <sup>2</sup>	5.0		
<b>27.3.7</b>	Supply and install Local marble threshold for under Doors and under windows 3-4 cm thickness. All as per drawings, specifications and supervision engineer.				
<b>a</b>	under Doors	m2	5		
<b>b</b>	under windows	m2	0		



27.3.8	Supply and Fix Wooden Doors 4.5 cm Thick single or double sashes. With (Frame),(4.5*3.5) cm hardwood (Zan) edging and (3.5*9.5) cm soft wood stile. Edge strip banding of width 4.5 mm. Formica over veneer on both sides, colour for frames and Architrave as directed by engineer. Door paneling to be soft wood 4.5*3.5 cm. each 4 cm., frames of galvanized steel sheet frame of 2mm thick for corridor doors ( as per drawings), width according to the wall thickness' and Allowance of 4 - 6 cm. thickness for plastering and tiling purposes, immersed in wood preservative before erection then embedded completely in sand - cement mortar and completely anchored as per specification. Architrave of Hardwood (Swedish)(4*1.2)cm, price to include ironmongery, kick plates of aluminium 20cm height from one side for main bath room doors, U shaped 10cm height from both sides at the bottom for internal doors kick plates of aluminium 20cm height for bath room doors, U shaped both sides, and at the bottom door stoppers, transparent fiber glass 6mm thick for both upper vision panel & for vision panel inside door leaf, gaskets cylindrical Lock ((Approved by Palestine Standards Institution), and painting in three coats of oil paint in addition to primer coat. Price includes also aluminium louvers of 50x60cm in the bottom for store doors. All as per Detailed Drawings, specification. Size as per drawings	No.	8		
	Rehabilitation of existing Wooden Doors. The price and Rehabilitation shall include replacement of all joints, new accessories, add U shaped 10cm height from both sides at the bottom for internal doors kick plates of aluminium 20cm height for bath room doors, add U shaped both sides, and at the bottom door stoppers, transparent fiber glass 6mm thick for both upper vision panel & for vision panel inside door leaf, gaskets cylindrical Lock ((Approved by Palestine Standards Institution), and painting in three coats of oil paint in addition to primer coat. Price includes also aluminium louvers of 50x60cm in the bottom for store doors. All as per Detailed Drawings, specification. Size as per drawings	No.	8		
27.3.9	Supply and Fix Wooden Doors 4.5 cm Thick single or double sashes. With Hardwood (Zan) Frame size (4.5*3.5) cm, and (3.5*9.5) cm soft wood stile. Edge strip banding of width 4.5 mm. Plywood veneer 5mm Thick on both sides. Door paneling to be soft wood 4.5*3.5 cm. each 4 cm. Frame of galvanized steel sheet frame of 2mm thick, width according to the wall thickness' and Allowance of 4 - 6 cm. thickness for plastering and tiling purposes, immersed in wood preservative before erection then embedded completely in sand - cement mortar and completely anchored as per specification. Price to include all the works including ironmongery, cylinders, locks, handles and paint.	No.	1		
27.3.10	Rehabilitation of existing Steel Doors. The price and Rehabilitation shall include replacement of all joints, new accessories, and painting in three coats of oil paint in addition to primer coat. Price includes also aluminium louvers of 50x60cm in the bottom for store doors. All as per Detailed Drawings, specification. Size as per drawings	No.	2		
<b>B. Electrical Works</b>					
	<p>Preamble: All Supplied Materials Should be Local Made (if available), Grade A and Free From Defects, Having Supervisor Certificate From Palestinian Standard Institution (PSI).</p> <p>Price to include submittal and obtaining approval of shop drawings, detailed and as-built drawings for all works as well as coordinating the same with the other services, activities and furniture.</p> <p>Price to include, also, submittal of catalogues and manufacturer instruction. Fixtures and appliances shall be measured in number. Supply and feeder Cables, cable conduits and cable trays shall not be measured but included in DB's prices</p> <p>Manholes, handholds and the like shall be measured in number. All Systems and devices shall be in lump sum including installation, testing and commissioning.</p> <p>Rates of fixtures and appliances shall include installation, wiring, switches and conduit works.</p> <p>All systems equipment (Class A and approved by Palestine Standards Institution)</p>				

27.3.11	<b>Lighting points</b> Supply, Install and Connect Lighting Points including fire proof boxes fire proof Conduits, fire retardant (E90) 3*1.5 mm2 cables and 5*1.5mm2 for emergency kits, Light Switches, and all accessories as per drawings and specifications. Price to also include any necessary painting or tiling after connecting the points.	SET No.	25		
27.3.12	<b>Lighting fixtures</b> Supply, Install and Connect the following high frequency control gear Lighting Fixtures including P.F. correction capacitors, Lamps, installation for all lighting fixtures using galvanized iron chains to suspend the fixtures in the ceiling and all accessories as per drawings and specifications. Supply and install 30X120 cm 34W/3700lm LED recessed modular panel with aluminium frame and opal diffuser, colour temp. 4000K UGR<19, IP40	SET No.	25		
<b>C. Mechanical Works</b>					
	Preamble. Supply networks pipes To Tanks, or from on roof feeding tanks to collectors shall be priced in Linear meter. Water tanks shall be measured in number. , Sanitary Fixtures shall be measured in number, price to include cold and hot water pipes supply and fittings to collectors, also to include drain supply , fittings connection, to manholes. Drains, Floor Traps, Clean outs and the like shall be measured in number. Internal sanitary sewers network shall be included in the rates of sanitary fixtures and appliances. and the sanitary fixtures includes the cost of poexgol pipes for basins, toilets, science lab basins, home economics basins, ..etc., price also includes the connection to drainage network of these fixtures in sanitary units and labs. Vents and vertical stacks shall measured in linear meter. Manhole, Galleys and the like shall be measured in number. External sewers pipes shall be measured in linear meter for each individual diameter and material. Rates of all fittings , fixtures , appliances and pipe laying shall include:- Supply of material, workmanship, installation, testing and commissioning. Rates to include also all peace's and fittings, including by passes , floats, cleaning outlets , automatic vents, vents and stack covers, valves and non return valves and the like needed to complete works as per specifications. Insulation and painting as called for in specifications. Excavation and cutting for all pipe laying works, bedding back filling and all works connected with pipe laying. All ties, sleeves, joints, tie bolts and rods, brackets and the like. Rates to include Workshops, Coordinated and as- built drawings as approved by the Engineer. , the contractor should submit best quality, approved two brands for each mechanical works items for approval, and should be approved by PSI, any cut in blocks for installations should be done using special cutting machine, (all mechanical materials as sanitary fixtures fixtures, devices should be Italy made, Germany, Spanish made or equivalent )				
27.3.13	Remove the old toilets and supply & Install Porcelain W.C. bowl class "A" white or coloured , (Italy, Spanish made or equivalent) with heavy duty seat and cover. Price includes plastic flush tank, hanging iron steel bracket, bolts and nuts, as well as flexible flush hose , valve, porcelain paper holder, connection to pexogol pipe, connection to drainage and all related materials. Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include complete removal of the old toilets, replacement of any broken tiles, broken valves and then supplying new Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings as per specifications , drawing and as directed by supervision engineer.	Complete Set	1		
27.3.14	Supply & Install Porcelain W.C. bowl class "A" white or coloured , (Italy, Spanish made or equivalent) with heavy duty seat and cover. Price includes plastic flush tank, hanging iron steel bracket, bolts and nuts, as well as flexible flush hose , valve, porcelain paper holder, connection to pexogol pipe, connection to drainage and all related materials. Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include complete removal of the old toilets, replacement of any broken tiles, broken valves and then supplying new Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings as per specifications , drawing and as directed by supervision engineer.	Complete Set	8		

<b>27.3.15</b>	Supply & Install Porcelain wall hung wash basin white or coloured engineer of size 50 x 45 cm of approved brand (Italy, Spanish made or equivalent), Price shall include chromium plated mixer with chromium plated handle mounted on wall. the price also includes connection to Pexogol pipe, porcelain soap holder , and all fixation and hanging bracket. Price includes supplying and installing 40x60cm mirror., semi pedestal and all other required materials, including connection to drainage system.	Complete Set	9		
<b>27.3.16</b>	Remove the old Arabic Style toilets and supply & Install a new one with all its accessories. Price includes plastic flush tank, hanging iron steel bracket, bolts and nuts, as well as flexible flush hose , valve, porcelain paper holder, connection to pexogol pipe, connection to drainage and all related materials. Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include complete removal of the old toilets, replacement of any broken tiles, broken valves and then supplying new Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings as per specifications , drawing and as directed by supervision engineer.	Complete Set	7		
<b>27.3.17</b>	Supply and Install White Vitreous Western type handicapped Toilet (Class A and approved by Palestine Standards Institution) Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings, accessories movable handle and fixed handle as shown on drawings and in Specifications. as per specifications , drawing and as directed by supervision Engineer.	Complete Set	1		
<b>27.3.18</b>	Supply and Install White Vitreous China handicapped Wash Basin(sliding type) (Class A and approved by Palestine Standards Institution), size (40 * 56) cm. Complete with all fittings, valves, waste pipes to nearest floor trap, taps or mixer (Class A and approved by Palestine Standards Institution), connection to water distribution, traps, and any other necessary parts as Specification and as directed by Eng. Price includes supplying and installing 40x60cm mirror. Gear tap.	Complete Set	1		
<b>27.3.19</b>	Supply and install 6" UPVC pipes SN8 heavy duty, at least (4.9mm) thick, Local Made or equal and must be approved by Palestine Standard Institution, between manholes in with all required materials, sockets, fittings , rubber seals, elbow, etc. The price includes excavation ,backfilling of at least 15 cm sand above , below and around the pipes including back-filling of selected material above the sand, and disposal of surplus excavated materials. Excavation shall be to any depth, width, and in any type of soil or rock, connection for internal sewerage network to connect to existing or proposed new sewage network or the septic tank and insulation of septic tank wall after connection.	L.M	0		
<b>27.3.20</b>	Heavy duty stainless steel 4" floor drain syphon trap with screw type screen and with closed covers for urinals , all of approved brand , complete with all required fittings and connections using reduced "T" for connecting sanitary fixtures, the traps in stairs to be with closed cover	No	15		
<b>27.3.21</b>	Supply, install and test Copper Collectors 3/4" dia., of approved brand. Price shall include all openings (eyes), and shall include for the required copper adaptors, hangers, supports, ties, air vents. Collectors shall be installed on walls, as shown on drawings. The work shall be completed as specified and according to the Engineer's instructions.	eye	48		

<b>27.3.22</b>	Supply and install wall/window type exhaust fans of approved manufacture (European type or equal) complete with self – act automatic shutter. Price includes galvanized ducts, grills, shutter and making necessary holes in walls or glass and fixing, and wiring cables all as per specifications, and approval of supervisor engineer. The fan shall have it is own electrical wiring inside walls or ceiling, one socket/key etc. The price shall include any excavation, painting, plastering etc. all as shown in drawings, specifications, and approval of supervisor engineer. Extract Fan, 100 CFM	No.	8		
<b>27.3.23</b>	Supply and install wall/window type exhaust fans of approved manufacture (European type or equal) complete with self – act automatic shutter. Price includes galvanized ducts, grills, shutter and making necessary holes in walls or glass and fixing, and wiring cables all as per specifications, and approval of supervisor engineer. The fan shall have it is own electrical wiring inside walls or ceiling, one socket/key etc. The price shall include any excavation, painting, plastering etc. all as shown in drawings, specifications, and approval of supervisor engineer. Extract Fan, 400 CFM IN LINE	No.	1		
<b>27.3.24</b>	Supply and install floor cleanout 4" UPVC including stainless steel (sraled type) cover (15*15cm) complete with connection to drain pipes as located in drawings, specifications and approval of supervisor engineer	No.	1		
<b>Total Al Farouq Preparatory Boys (NIS)</b>					

BILLS OF QUANTITIES					
CONSULTANT: Universal Group for Engineering and Consulting			DATE: March 2023		
Beit Liqya Secondary Girls School					
ITEM No.	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (ILS)	AMOUNT (ILS)
28.1	Preliminary Items				
28.1.1	Supply and installation of the project marble sign (110 cm x 70cm) that include coloured project information. The Contractor shall do the design and fix the sign as per the supervision engineer instructions. The price shall include fixing the sign properly with all required drilling, jumboo bolts, rehabilitation of any damages occurred during fixation.	No.	1		
28.1.2	Demolishing works inside the WASH facility (WC) that intersects with the designed structure in accordance with the drawings. The price shall include remove all demolished materials to approved locations outside the schools as per the supervision engineer instructions. Price also include Remove carefully works inside the WASH facility (WC). The price shall include but not limited to remove carefully, main doors, WC doors, sinks, wash basins, lighting Points, Collectors, accessories, taps, etc. all as per drawings, and Engineer instructions. The Contractor shall transport all removed materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
28.1.3	Demolishing works for existing natural stones, concrete and hollow block wall to extended the WASH facility. The price shall include remove all demolished materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
28.2	External Works				
28.2.1	<u>Drinking Fountain Works:</u> Supply and install outside drinking fountain as shown on drawings, rate includes, sink 6.35X0.75m on block stands, the work should be finished and completed to the highest standard. Rate include excavation, B200 R. concrete (all steel reinforcement required), stone works, plastering, glazing tiles, local marble coping, planters and metal cover with all fittings, 12 unit high quality (Class A and approved by Palestine Standards Institution) chrome plated taps of approved kind, rates also include p.v.c. Drainpipe outlet to green area or as per drawings.	L.S	1		
28.2.2	<u>Awning Works</u> Supply and install steel awning at one location or several location as per the detail in the drawing and as per supervision engineer. The price shall also include all steel tubes (columns, horizontal, vertical etc.), steel corrugated sheets, drain gutters, steel bolts, excavation, backfilling, reinforced concrete foundations, reinstatement, 3 Inch galvanized Steel rain water, painting, the fixation, joints, angles and whatever necessary to complete the work in accordance with the drawings, specifications and to the approval of the supervision engineer. Price to include any required works including but not limited to, sealant works, fixing, fastening, welding etc. The Hight of the awning as per drawings or 3.5 meter if not mentioned. The final location or several locations of awning will be fixed during the shop drawing phase and as instructed by the supervision engineer, the Contractor shall not claim for additional cost or object.	m2	22		
28.2.3	<u>Handicap Ramp Works and stairs:</u> Supply and Build handicap ramp made from Reinforced Concrete. The price shall include excavation, backfilling, reinstatement, demolish of all obstacles, steel reinforcement, reinforced concrete for ground beam and slab, hollow block wall, 5 cm natural stone tiles, compacted base Corse etc., in accordance with the drawings, details, specifications and to the instructions of the supervision engineer. Handrails of 50mm steel pipes and to include Fixing completely, oil paint three coats in addition to primer coat the hand rails are to be on both sides of the ramp. Price to also include chakered plate, and PVC rubber to the height 2m to the columns. The Contractor to submit shop drawings and details to be approved by the Engineers. Price includes cleaning, plastering and painting the wall adjacent to the newly installed ramp.	L.S	1		
28.3	Rehabilitation and Extension of Existing WASH unit				
A. Civil Works					

<b>28.3.1</b>	Site clearance of any type of stairs, reinforced concrete, trees, branches, rocks, etc. in order to start the work. While keeping the trees intact and safe in order to re-plant the trees in a suitable place in accordance with the supervision engineer and to his approval.	L.S	1.0		
<b>28.3.2</b>	Excavation for foundations and/or ground beam in any kind of soil or rock to the dimensions and levels shown in the drawings. (from N.G.L to bottom of hardcore layer) Price to include removal of extra and unsuitable soil to approved location. The price shall include reinstatement of any damage occurred during excavation. All as per drawings and specifications and supervision instructions.	M3	4.0		
<b>28.3.3</b>	Import and fill with selected Imported Approved Fill; to the required levels and where directed by the Engineer. Filling shall be on layers not to exceed 20cm. thick. Price to include levelling, watering and compacting to 98 % field density and all related works according to drawings and specifications and engineer instructions. The contractor to backfill using excavated soil if suitable or imported approved material.	M3	4.0		
<b>28.3.4</b>	Supply and Well Compact 40cm thick Base Coarse as per drawing compacted to min.98% of maximum dry density of modified Proctor, in layers 20cm thick. Price includes levelling, watering, levelling and compacting of ground (sub-base) under base coarse to min. 98% according to Field Density Test. Under foundation	M2	6.0		
<b>28.3.5</b>	Blinding Concrete grade 'B200' With a minimum cement content of 250 Kg. per cubic meter under footings and tie beams and where required, Thickness not less than 10cm thick, should be according to drawings. Price to include all required work according to specifications and drawings and engineer instruction.	M2	6.0		
<b>28.3.6</b>	Supply and Cast Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include shuttering, reinforcing , painting with two coats of hot bitumen (75/25) (for the buried parts) and all related works according to drawings and specifications and engineer instructions. For the foundations	M3	1.2		
<b>28.3.7</b>	Supply and Cast Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include shuttering, reinforcing , painting with two coats of hot bitumen (75/25) (for the buried parts) and all related works according to drawings and specifications and engineer instructions. For the ground beams	M3	1.0		
<b>28.3.8</b>	Supply and Cast Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include shuttering, reinforcing and all related works according to drawings and specifications and engineer instructions. For the columns	M3	1.0		
<b>28.3.9</b>	Supply and Cast 10 cm of Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include shuttering, reinforcing , painting with two coats of hot bitumen (75/25) (for the buried parts) and all related works according to drawings and specifications and engineer instructions. For the slab on grade	M2	8.0		
<b>28.3.10</b>	Supply and Cast 20 cm Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include shuttering, reinforcing , painting with two coats of hot bitumen (75/25) (for the buried parts) and all related works according to drawings and specifications and engineer instructions. For the solid slab including beams and drop beams	M2	8.0		

<b>28.3.11</b>	Supply & apply Special Concrete Screed to Roof, cast to falls not less than 40 mm at drain. Thickness in the lower point as shown on detailed drawings with smooth surface finish. Price also includes Plain Cast in Place Concrete Grade 'B-200' hunching and lining to all edges of roof screed and parapet, with slope 1: 1 to minimum height of 20 cm. All to comply with specifications and Engineers directions.  To be applied to the roof	m2	55.0		
<b>28.3.12</b>	Supply and Build Concrete Block Walls, 'Grade 35' of any size blocks single or cavity . the measurements will be to one side only all done according to the dwg. specifications and Engineer instructions and approval. Hollow blocks 20 cm thick for the walls of the toilet. Price shall also include Supply and Cast Reinforced Concrete Grade 'B250 With a minimum cement content of 300 Kg. per cubic meter. Price also to include shuttering, reinforcing 4Ø10 and stirrups 1Ø8@25cm, and all related works according to drawings and specifications and engineer instructions. For the beams 20cmX 20cm above Hollow blocks	M <sup>2</sup>	30.0		
<b>28.3.13</b>	supply and install two Coats of Cement and Sand Plaster over one slurry coat to walls and ceilings and where required for External plastering. price include Waterproofing additive (W 290) with the second and last face and painting with standard approved colour Waterproofing supercyl for External walls of the existing structure at the entrance. Price to also include 2 coats of external painting (supercryle). To the toilets.	M <sup>2</sup>	80.0		
<b>28.3.14</b>	Supply and paint three coats polycide paint for ceilings including corridor ceilings of high quality (Approved by Palestine Standards Institution) and by the supervision engineer.	M <sup>2</sup>	80.0		
<b>28.3.15</b>	Supply & paint three coats of external quality waterproofing supercyle paint for Corridors (walls) and parapet wall according to drawings and specifications.	M <sup>2</sup>	64.0		
<b>28.3.16</b>	Supply and Fix Factory-made Steel Doors as per drawings, specification. Price to include frame (door) (as per details), fixing completely, ironmongery, cylinders, cylindrical locks handles (Approved by Palestine Standards Institution). 6 mm. glazing, gaskets, oil Paint in three coats in addition to two primer coats. A 40cm x 40cm sign made of Metal shall be fixed on the door. The sign should be coloured and the icon and writing to be assigned by the supervision engineer, Dimensions: as per drawings	No.	1		
<b>28.3.17</b>	Supply and Install Non-Slip Coloured Ceramic Floor Tiles Thickness 0.6 cm. First choice and free from all defect grade "A". (Approved by Palestine Standards Institution). Price to include sand with cement filling (Grade B-100), pointing with white cement and cleaning on site, removal of the old tiles, levelling and all the necessary work to complete the job in accordance with the instructions of the supervision engineer.	M <sup>2</sup>	55.0		
<b>28.3.18</b>	Supply and Install White Glazed or coloured Ceramic Wall Tiles Thickness 0.6 cm, First choice European type and free from all defects Grade "A". (Approved by Palestine Standards Institution). Price to include white round aluminium edges patching around services. Two coats of epoxy pointing ..All works shall be in accordance with drawings and specifications.	M <sup>2</sup>	75.0		
<b>28.3.19</b>	Supply, fix and operate non sliding Aluminium Windows extrusion Section 7700 or equal, with protective electrostatic applied polyester powder paint of 70-80 microns. Price to include 6.38mm thick laminated glass (3+0.38+3mm) for double glass. float glazing and all other accessories and fittings to complete works as per drawings and specifications. Dimensions of 0.4X 0.6 m and one 1mX1m Price shall include the steel protection from outside made of steel frame and steel wire mesh. Price shall also include painting, fixing etc.	M2	2.0		

28.3.20	Supply and apply app waterproofing membrane of bitumen rolls. (4 mm. of reinforced polyester sheets) covered with layer of white chipping, over roof slab and around parapets with overlaps of not less than 10 cm. Price to include primer coats of approval source according to specifications and engineer's instructions.	M <sup>2</sup>	53.0		
28.3.21	Supply and install Local marble threshold 3-4 cm thickness. All as per drawings, specifications and supervision engineer.				
A	under Doors	m2	1.7		
B	under Windows	m2	0.8		
c	Stairs	m2	1.6		
d	Surrounding the roof	m2	4.5		
28.3.22	Supply and Build Stairs to the WASH Facility. The stairs shall be made of marble on reinforced concrete complete as per drawings, specifications and Engineer instructions.	L.M	4.0		
28.3.23	Supply and Fix Wooden Doors 4.5 cm Thick single or double sashes. With (Frame),(4.5*3.5) cm hardwood (Zan) edging and (3.5*9.5) cm soft wood stile. Edge strip banding of width 4.5 mm. Formica over veneer on both sides, colour for frames and Architrave as directed by engineer. Door paneling to be soft wood 4.5*3.5 cm. each 4 cm., frames of galvanized steel sheet frame of 2mm thick for corridor doors ( as per drawings), width according to the wall thickness' and Allowance of 4 - 6 cm. thickness for plastering and tiling purposes, immersed in wood preservative before erection then embedded completely in sand - cement mortar and completely anchored as per specification. Architrave of Hardwood (Swedish)(4*1.2)cm, price to include ironmongery, kick plates of aluminium 20cm height from one side for main bath room doors, U shaped 10cm height from both sides at the bottom for internal doors kick plates of aluminium 20cm height for bath room doors, U shaped both sides, and at the bottom door stoppers, transparent fiber glass 6mm thick for both upper vision panel & for vision panel inside door leaf, gaskets cylindrical Lock ((Approved by Palestine Standards Institution), and painting in three coats of oil paint in addition to primer coat. Price includes also aluminium louvers of 50x60cm in the bottom for store doors. All as per Detailed Drawings, specification. Size as per drawings	No.	3.0		
28.3.24	Supply & apply Special Concrete Screed to Roof, cast to falls not less than 40 mm at drain. Thickness in the lower point as shown on detailed drawings with smooth surface finish. Price also includes Plain Cast in Place Concrete Grade 'B-200' hunching and lining to all edges of roof screed and parapet, with slope 1: 1 to minimum height of 20 cm. All to comply with specifications and Engineers directions. To be applied to the roof	m2	10.0		
<b>B. Electrical Works</b>					
	Preamble: All Supplied Materials Should be Local Made (if available), Grade A and Free From Defects, Having Supervisor Certificate From Palestinian Standard Institution (PSI). Price to include submittal and obtaining approval of shop drawings, detailed and as-built drawings for all works as well as coordinating the same with the other services, activities and furniture. Price to include, also, submittal of catalogues and manufacturer instruction. Fixtures and appliances shall be measured in number. Supply and feeder Cables, cable conduits and cable trays shall not be measured but included in DB's prices Manholes, handholds and the like shall be measured in number. All Systems and devices shall be in lump sum including installation, testing and commissioning. Rates of fixtures and appliances shall include installation, wiring, switches and conduit works. All systems equipment (Class A and approved by Palestine Standards Institution)				
28.3.25	<b>Lighting points</b> Supply, Install and Connect Lighting Points including fire proof boxes fire proof Conduits, fire retardant (E90) 3*1.5 mm2 cables and 5*1.5mm2 for emergency kits, Light Switches, and all accessories as per drawings and specifications. Price to also include any necessary painting or tiling after connecting the points.	SET No.	5		



28.3.26	<p><b>Lighting fixtures</b></p> <p>Supply, Install and Connect the following high frequency control gear Lighting Fixtures including P.F. correction capacitors, Lamps, installation for all lighting fixtures using galvanized iron chains to suspend the fixtures in the ceiling and all accessories as per drawings and specifications. Supply and install Surface mounted Type A or Type B as per drawings</p>	SET No.	5		
28.3.27	<p><b>Main Electrical Connection</b></p> <p>Supply, Install and Connect 5x6mm<sup>2</sup> XLPE cable include 1Φ1.5" PVC conduit from MDB to the new Unit. Price shall also include excavation, any necessary painting, plastering or tiling after connecting the points.</p>	L.M	10		
<b>C. Mechanical Works</b>					
	<p>Preamble. Supply networks pipes To Tanks, or from on roof feeding tanks to collectors shall be priced in Linear meter. Water tanks shall be measured in number. , Sanitary Fixtures shall be measured in number, price to include cold and hot water pipes supply and fittings to collectors, also to include drain supply , fittings connection, to manholes. Drains, Floor Traps, Clean outs and the like shall be measured in number.</p> <p>Internal sanitary sewers network shall be included in the rates of sanitary fixtures and appliances. and the sanitary fixtures includes the cost of poexgol pipes for basins, toilets, science lab basins, home economics basins, ..etc., price also includes the connection to drainage network of these fixtures in sanitary units and labs. Vents and vertical stacks shall measured in linear meter. Manhole, Galleys and the like shall be measured in number. External sewers pipes shall be measured in linear meter for each individual diameter and material. Rates of all fittings , fixtures , appliances and pipe laying shall include:- Supply of material, workmanship, installation, testing and commissioning. Rates to include also all peace's and fittings, including by passes , floats, cleaning outlets , automatic vents, vents and stack covers, valves and non return valves and the like needed to complete works as per specifications. Insulation and painting as called for in specifications. Excavation and cutting for all pipe laying works, bedding back filling and all works connected with pipe laying. All ties, sleeves, joints, tie bolts and rods, brackets and the like. Rates to include Workshops, Coordinated and as- built drawings as approved by the Engineer. , the contractor should submit best quality, approved two brands for each mechanical works items for approval, and should be approved by PSI, any cut in blocks for installations should be done using special cutting machine, (all mechanical materials as sanitary fixtures fixtures, devices should be Italy made, Germany, Spanish made or equivalent )</p>				
28.3.28	<p>Remove existing and replace, Supply and Install White Vitreous Western type handicapped Toilet (Class A and approved by Palestine Standards Institution) Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings, accessories movable handle and fixed handle as shown on drawings and in Specifications. as per specifications , drawing and as directed by supervision Engineer.</p>	Complete Set	3		

<b>28.3.29</b>	Supply and install 6" UPVC pipes SN8 heavy duty, at least (4.9mm) thick, Local Made or equal and must be approved by Palestine Standard Institution, between manholes in with all required materials, sockets, fittings, rubber seals, elbow, etc. The price includes excavation ,backfilling of at least 15 cm sand above , below and around the pipes including back-filling of selected material above the sand, and disposal of surplus excavated materials. Excavation shall be to any depth, width, and in any type of soil or rock, connection for internal sewage network to connect to existing or proposed new sewage network or the septic tank and insulation of septic tank wall after connection.	L.M	0		
<b>28.3.30</b>	Supply and install 4" galvanized vertical pipes heavy duty for rain water, Local Made or equal and must be approved by Palestine Standard Institution. Price includes digging for pipes, supports, hangers, and all rubber joints and sealants, and rainwater pipe end outlets from roof to ground.	L.M	4		
<b>28.3.31</b>	Heavy duty stainless steel 4" floor drain syphon trap with screw type screen and with closed covers for urinals, all of approved brand, complete with all required fittings and connections using reduced "T" for connecting sanitary fixtures, the traps in stairs to be with closed cover	No	1		
<b>28.3.32</b>	Supply and Install of Precast Concrete Manholes with minimum 15cm wall thickness for sewage and storm water drainage In compliance with specifications and Drawings. Price shall include excavation to any depth according to slopes, B200 reinforced concrete for base, back filling, cement plaster, benching, 8 or 25Ton Cast Iron cover as indicated, drop if needed, and all necessary works. all as shown in drawings, specifications, and approval of supervisor engineer. a. Ø60cm, 8 ton C.I cover	NO.	1		
<b>28.3.33</b>	Supply, install and test Copper Collectors 3/4" dia., of approved brand. Price shall include all openings (eyes), and shall include for the required copper adaptors, hangers, supports, ties, air vents. Collectors shall be installed on walls, as shown on drawings. The work shall be completed as specified and according to the Engineer's instructions.	eye	8		
<b>28.3.34</b>	Supply and install wall/window type exhaust fans of approved manufacture (European type or equal) complete with self – act automatic shutter. Price includes galvanized ducts, grills, shutter and making necessary holes in walls or glass and fixing, and wiring cables all as per specifications, and approval of supervisor engineer. The fan shall have it is own electrical wiring inside walls or ceiling, one socket/key etc. The price shall include any excavation, painting, plastering etc. all as shown in drawings, specifications, and approval of supervisor engineer. Extract Fan, 100 CFM	No.	3		
<b>28.3.35</b>	Supply and install floor cleanout 4" UPVC including stainless steel (sraled type) cover (15*15cm) complete with connection to drain pipes as located in drawings, specifications and approval of supervisor engineer	No.	2		
<b>28.4</b>	<b>Rehabilitation of Handicap Unit</b>				
<b>28.4.1</b>	Replace existing and Supply and Install White Vitreous Western type handicapped Toilet (Class A and approved by Palestine Standards Institution) Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings, accessories movable handle and fixed handle as shown on drawings and in Specifications. as per specifications, drawing and as directed by supervision Engineer.	Complete Set	1		

28.4.2	<p>Replace existing and Supply and Install White Vitreous China handicapped Wash Basin(sliding type) (Class A and approved by Palestine Standards Institution), size (40 * 56) cm. Complete with all fittings, valves, waste pipes to nearest floor trap, taps or mixer (Class A and approved by Palestine Standards Institution), connection to water distribution, traps, and any other necessary parts as Specification and as directed by Eng. Price includes supplying and installing 40x60cm mirror. Gear tap.</p>	Complete Set	1		
Total Beit Liqya Secondary Girls School (NIS)					

BILLS OF QUANTITIES					
CONSULTANT: Universal Group for Engineering and Consulting			DATE: March 2023		
Al Muthalath Preparatory Boys School					
ITEM No.	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (ILS)	AMOUNT (ILS)
29.1	Preliminary Items				
29.1.1	Supply and installation of the project marble sign (110 cm x 70cm) that include coloured project information. The Contractor shall do the design and fix the sign as per the supervision engineer instructions. The price shall include fixing the sign properly with all required drilling, jumboo bolts, rehabilitation of any damages occurred during fixation.	No.	1		
29.1.2	Demolishing works inside the WASH facilities (WCs) that intersects with the designed structure in accordance with the drawings. The price shall include remove all demolished materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
29.1.3	Remove carefully works inside the WASH facilities (WCs). The price shall include but not limited to remove carefully, main doors, WC doors, sinks, wash basins, lighting Points, Collectors, accessories, taps, etc. all as per drawings, and Engineer instructions. The Contractor shall transport all removed materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
29.1.4	<b>Reduce the level of the toilets</b> Allow for every expenses to reduce the levels of the toilets to be as per specifications. The price shall also include all needed works to complete the works as per drawings, specifications and engineer instructions. The Contractor shall transport all removed materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
29.2	External Works				
29.2.1	<b>Drinking Fountain Works:</b> Rehabilitation of existing old Drinking Fountain outside drinking fountain. Price shall include supply and install and rehabilitation of the tiles, the sinks is 7.70 m long as per pictures, the work should be finished and completed to the highest standard. Rate include supply and install galvanized mesh fence with steel frame 2.5 diameter standard 0.5inch * 0.5 inch spacing for the mesh, hinges, metal angles, lock, reinforced concrete of 10cm thick with external plastering, sand and cement mortar, 20*20cm ceramic tiles, 2 inch pvc pipe, 10-cm cement blocks, 14 unit high quality (Class A and approved by Palestine Standards Institution) chrome plated taps of approved kind, rates also include p.v.c. Drainpipe outlet to the nearest manhole. And the accessories and equipment needed to finish the work in accordance with the details and the instructions of the supervision engineer. Price shall also include all necessary excavation, backfilling, reinforced concrete, reinstatement etc.	L.S	1		
29.2.2	<b>Awning Works</b> Supply and install steel awning at one location or several location as per the detail in the drawing and as per supervision engineer. The price shall also include all steel tubes (columns, horizontal, vertical etc.), steel corrugated sheets, drain gutters, steel bolts, excavation, backfilling, reinforced concrete foundations, reinstatement, 3 Inch galvanized Steel rain water, painting, the fixation, joints, angles and whatever necessary to complete the work in accordance with the drawings, specifications and to the approval of the supervision engineer. Price to include any required works including but not limited to, sealant works, fixing, fastening, welding etc. The Hight of the awning as per drawings or 3.5 meter if not mentioned. The final location or several locations of awning will be fixed during the shop drawing phase and as instructed by the supervision engineer, the Contractor shall not claim for additional cost or object.	m2	25		

29.2.3	<p><b>Handicap Ramp Works:</b> Supply and Build handicap ramp made from Reinforced Concrete. The price shall include excavation, backfilling, reinstatement, demolish of all obstacles, steel reinforcement, reinforced concrete for ground beam and slab, hollow block wall, 5 cm natural stone tiles, compacted base Corse etc., in accordance with the drawings, details, specifications and to the instructions of the supervision engineer. Handrails of 50mm steel pipes and to include Fixing completely, oil paint three coats in addition to primer coat the hand rails are to be on both sides of the ramp. Price to also include chakered plate, and PVC rubber to the height 2m to the columns. The Contractor to submit shop drawings and details to be approved by the Engineers. Price includes cleaning, plastering and painting the wall adjacent to the newly installed ramp.</p>	L.S	1		
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<b>29.3</b>	<b>Rehabilitation of existing WASH units (Two compartments)</b>				
<b>A. Civil Works</b>					
<b>29.3.1</b>	Supply and Build Concrete Block Walls, 'Grade 35' of any size blocks single or cavity. The measurements will be to one side only all done according to the dwg. specifications and Engineer instructions and approval. Hollow blocks 10 cm thick for the partition walls. Price shall also include Supply and Cast Reinforced Concrete Grade 'B250 With a minimum cement content of 300 Kg. per cubic meter. Price also to include shuttering, reinforcing 4Ø10 and stirrups 1Ø8@25cm, and all related works according to drawings and specifications and engineer instructions. For the beams 20cmX 10cm above Hollow blocks	M <sup>2</sup>	20.0		
<b>29.3.2</b>	Supply and paint three coats polycide paint for ceilings including corridor ceilings of high quality (Approved by Palestine Standards Institution) and by the supervision engineer.	M <sup>2</sup>	50		
<b>29.3.3</b>	Supply and paint high quality emulsion paint, for top walls and internal drop beams (sides and bottom), on one priming coat and two finishing coats, using two coats of complete putty, as per satisfaction of the supervisor engineer.	M <sup>2</sup>	22		
<b>29.3.4</b>	Supply and Fix Factory-made Steel Doors as per drawings, specification. Price to include frame (door) (as per details), fixing completely, ironmongery, cylinders, cylindrical locks handles (Approved by Palestine Standards Institution). 6 mm. glazing, gaskets, oil Paint in three coats in addition to two primer coats. A 40cm x 40cm sign made of Metal shall be fixed on the door. The sign should be coloured and the icon and writing to be assigned by the supervision engineer, Dimensions: 1m *2.0m	No.	2		
<b>29.3.5</b>	Supply and Install Non-Slip Coloured Ceramic Floor Tiles Thickness 0.6 cm. First choice and free from all defect grade "A". (Approved by Palestine Standards Institution). Price to include sand with cement filling (Grade B-100), pointing with white cement and cleaning on site, removal of the old tiles, levelling and all the necessary work to complete the job in accordance with the instructions of the supervision engineer.	M <sup>2</sup>	50		
<b>29.3.6</b>	Supply and Install White Glazed or coloured Ceramic Wall Tiles Thickness 0.6 cm, First choice European type and free from all defects Grade "A". (Approved by Palestine Standards Institution). Price to include white round aluminium edges patching around services. Two coats of epoxy pointing ..All works shall be in accordance with drawings and specifications.	M <sup>2</sup>	130		
<b>29.3.7</b>	Supply, fix and operate non sliding Aluminium Windows extrusion Section 7700 or equal, with protective electrostatic applied polyester powder paint of 70-80 microns. Price to include 6.38mm thick laminated glass (3+0.38+3mm) for double glass. float glazing and all other accessories and fittings to complete works as per drawings and specifications. Price shall include the steel protection from outside made of steel frame and steel wire mesh. Price shall also include painting, fixing etc.	M <sup>2</sup>	6.0		
<b>29.3.8</b>	Supply and install Local marble threshold for under Doors and under windows 3-4 cm thickness. All as per drawings, specifications and supervision engineer.	m2	6		

29.3.9	Supply and Fix Wooden Doors 4.5 cm Thick single or double sashes. With (Frame).(4.5*3.5) cm hardwood (Zan) edging and (3.5*9.5) cm soft wood stile. Edge strip banding of width 4.5 mm. Formica over veneer on both sides, colour for frames and Architrave as directed by engineer. Door paneling to be soft wood 4.5*3.5 cm. each 4 cm., frames of galvanized steel sheet frame of 2mm thick for corridor doors ( as per drawings), width according to the wall thickness' and Allowance of 4 - 6 cm. thickness for plastering and tiling purposes, immersed in wood preservative before erection then embedded completely in sand - cement mortar and completely anchored as per specification. Architrave of Hardwood (Swedish)(4*1.2)cm, price to include ironmongery, kick plates of aluminium 20cm height from one side for main bath room doors, U shaped 10cm height from both sides at the bottom for internal doors kick plates of aluminium 20cm height for bath room doors, U shaped both sides, and at the bottom door stoppers, transparent fiber glass 6mm thick for both upper vision panel & for vision panel inside door leaf, gaskets cylindrical Lock ((Approved by Palestine Standards Institution), and painting in three coats of oil paint in addition to primer coat. Price includes also aluminium louvers of 50x60cm in the bottom for store doors. All as per Detailed Drawings, specification. Size as per drawings	No.	10		
29.3.10	Supply and Fix Wooden Doors 4.5 cm Thick single or double sashes. With Hardwood (Zan) Frame size (4.5*3.5) cm, and (3.5*9.5) cm soft wood stile. Edge strip banding of width 4.5 mm. Plywood veneer 5mm Thick on both sides. Door paneling to be soft wood 4.5*3.5 cm. each 4 cm. Frame of galvanized steel sheet frame of 2mm thick, width according to the wall thickness' and Allowance of 4 - 6 cm. thickness for plastering and tiling purposes, immersed in wood preservative before erection then embedded completely in sand - cement mortar and completely anchored as per specification. Price to include all the works including ironmongery, cylinders, locks, handles and paint.	No.	1		
<b>B. Electrical Works</b>					
	<p>Preamble: All Supplied Materials Should be Local Made (if available), Grade A and Free From Defects, Having Supervisor Certificate From Palestinian Standard Institution (PSI).</p> <p>Price to include submittal and obtaining approval of shop drawings, detailed and as-built drawings for all works as well as coordinating the same with the other services, activities and furniture.</p> <p>Price to include, also, submittal of catalogues and manufacturer instruction.</p> <p>Fixtures and appliances shall be measured in number. Supply and feeder Cables, cable conduits and cable trays shall not be measured but included in DB's prices</p> <p>Manholes, handholds and the like shall be measured in number. All Systems and devices shall be in lump sum including installation, testing and commissioning.</p> <p>Rates of fixtures and appliances shall include installation, wiring, switches and conduit works.</p> <p>All systems equipment (Class A and approved by Palestine Standards Institution)</p>				
29.3.10	<p><b>Lighting points</b></p> <p>Supply, Install and Connect Lighting Points including fire proof boxes fire proof Conduits, fire retardant (E90) 3*1.5 mm2 cables and 5*1.5mm2 for emergency kits, Light Switches, and all accessories as per drawings and specifications. Price to also include any necessary painting or tiling after connecting the points.</p>	SET No.	7		
29.3.11	<p><b>Lighting fixtures</b></p> <p>Supply, Install and Connect the following high frequency control gear Lighting Fixtures including P.F. correction capacitors, Lamps, installation for all lighting fixtures using galvanized iron chains to suspend the fixtures in the ceiling and all accessories as per drawings and specifications. Supply and install Surface mounted Type A or Type B as per drawings</p>	SET No.	7		
<b>C. Mechanical Works</b>					

	<p>Preamble. Supply networks pipes To Tanks, or from on roof feeding tanks to collectors shall be priced in Linear meter. Water tanks shall be measured in number. , Sanitary Fixtures shall be measured in number, price to include cold and hot water pipes supply and fittings to collectors, also to include drain supply , fittings connection, to manholes. Drains, Floor Traps, Clean outs and the like shall be measured in number.</p> <p>Internal sanitary sewers network shall be included in the rates of sanitary fixtures and appliances. and the sanitary fixtures includes the cost of poexgol pipes for basins, toilets, science lab basins, home economics basins, ..etc., price also includes the connection to drainage network of these fixtures in sanitary units and labs. Vents and vertical stacks shall measured in linear meter. Manhole, Galleys and the like shall be measured in number. External sewers pipes shall be measured in linear meter for each individual diameter and material. Rates of all fittings , fixtures , appliances and pipe laying shall include:- Supply of material, workmanship, installation, testing and commissioning. Rates to include also all peace's and fittings, including by passes , floats, cleaning outlets , automatic vents, vents and stack covers, valves and non return valves and the like needed to complete works as per specifications. Insulation and painting as called for in specifications. Excavation and cutting for all pipe laying works, bedding back filling and all works connected with pipe laying. All ties, sleeves, joints, tie bolts and rods, brackets and the like. Rates to include Workshops, Coordinated and as- built drawings as approved by the Engineer. , the contractor should submit best quality, approved two brands for each mechanical works items for approval, and should be approved by PSI, any cut in blocks for installations should be done using special cutting machine, (all mechanical materials as sanitary fixtures fixtures, devices should be Italy made, Germany, Spanish made or equivalent )</p>				
29.3.12	<p>Remove the old Arabic style toilets and supply &amp; Install Porcelain W.C. bowl class "A" white or coloured , (Italy, Spanish made or equivalent) with heavy duty seat and cover. Price includes plastic flush tank, hanging iron steel bracket, bolts and nuts, as well as flexible flush hose , valve, porcelain paper holder, connection to pexogol pipe, connection to drainage and all related materials. Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include complete removal of the old toilets, replacement of any broken tiles, broken valves and then supplying new Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings as per specifications , drawing and as directed by supervision engineer.</p>	Complete Set	10		
29.3.13	<p>Supply &amp; Install Porcelain wall hung wash basin white or coloured engineer of size 50 x 45 cm of approved brand (Italy, Spanish made or equivalent), Price shall include chromium plated mixer with chromium plated handle mounted on wall. the price also includes connection to Pexogol pipe, liquide soap holder , and all fixation and hanging bracket. Price includes supplying and installing 40x60cm mirror., semi pedestal and all other required materials, including connection to drainage system.</p>	Complete Set	7		
29.3.18	<p>Heavy duty stainless steel 4" floor drain syphon trap with screw type screen and with closed covers for urinals , all of approved brand , complete with all required fittings and connections using reduced "T" for connecting sanitary fixtures, the traps in stairs to be with closed cover</p>	No	3		
29.3.19	<p>Supply, install and test Copper Collectors 3/4" dia., of approved brand. Price shall include all openings (eyes), and shall include for the required copper adaptors, hangers, supports, ties, air vents. Collectors shall be installed on walls, as shown on drawings. The work shall be completed as specified and according to the Engineer's instructions.</p>	eye	27		



<b>29.3.20</b>	Supply and install wall/window type exhaust fans of approved manufacture (European type or equal) complete with self – act automatic shutter. Price includes galvanized ducts, grills, shutter and making necessary holes in walls or glass and fixing, and wiring cables all as per specifications, and approval of supervisor engineer. The fan shall have it is own electrical wiring inside walls or ceiling, one socket/key etc. The price shall include any excavation, painting, plastering etc. all as shown in drawings, specifications, and approval of supervisor engineer. Extract Fan, 100 CFM	No.	8		
<b>29.3.21</b>	Supply and Install Polyethylene White, domestic Water Tank. Capacity 1500 lit. "With Quality approval Tag" Including well painted steel balustrade support , automatic copper float valve, isolating valves, drain valve, fittings, vents, screwed cover, piping and connections till main cold water piping and all accessories; all according to the engineers' instructions and approval, the mounting of the tanks should be according to details including special bracing and flexible connections, painted steel base and what is required to complete the work. The price shall also include Steel structure with 2 meter hight to carry the tank safely.	No.	2		
<b>29.3.22</b>	Supply and install floor cleanout 4" UPVC including stainless steel (sraled type) cover (15*15cm) complete with connection to drain pipes as located in drawings, specifications and approval of supervisor engineer	No.	2		
<b>Total Muthalath Preparatory Boys School (NIS)</b>					

BILLS OF QUANTITIES					
CONSULTANT: Universal Group for Engineering and Consulting			DATE: March 2023		
Bir Al Basha Secondary Girls School					
ITEM No.	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (ILS)	AMOUNT (ILS)
30.1	Preliminary Items				
30.1.1	Supply and installation of the project marble sign (110 cm x 70cm) that include coloured project information. The Contractor shall do the design and fix the sign as per the supervision engineer instructions. The price shall include fixing the sign properly with all required drilling, jumbo bolts, rehabilitation of any damages occurred during fixation.	No.	1		
30.1.2	Demolish works for existing drinking fountain. The price shall include all needed works such (remove any obstacles or walls etc.) to allow access to the site for the Contractor machines and manpower etc.. The Contractor shall reinstate any damage he occurs during implementation and any structure he demolish to its original conditions.	L.S	1		
30.2	External Works				
30.2.1	<b>Drinking Fountain Works:</b> Supply and install L shape outside drinking fountain as shown on drawings, rate includes, sink 6 m long on block stands as per detail, the work should be finished and completed to the highest standard. Rate include galvanized mesh fence with steel frame 2.5 diameter standard 0.5inch * 0.5 inch spacing for the mesh, hinges, metal angles, lock, reinforced concrete of 10cm thick with external plastering, sand and cement mortar, 20*20cm ceramic tiles, 2 inch pvc pipe, 10-cm cement blocks, 10 unit high quality (Class A and approved by Palestine Standards Institution) chrome plated taps of approved kind, rates also include p.v.c. Drainpipe outlet to the nearest manhole. And the accessories and equipment needed to finish the work in accordance with the details and the instructions of the supervision engineer. Price shall also include all necessary excavation, backfilling, reinforced concrete, reinstatement etc.	L.S	1		
30.2.2	<b>Awning Works</b> Supply and install steel awning at one location or several location as per the detail in the drawing and as per supervision engineer. The price shall also include all steel tubes (columns, horizontal, vertical etc.), steel corrugated sheets, drain gutters, steel bolts, excavation, backfilling, reinforced concrete foundations, reinstatement, 3 Inch galvanized Steel rain water, painting, the fixation, joints, angles and whatever necessary to complete the work in accordance with the drawings, specifications and to the approval of the supervision engineer. Price to include any required works including but not limited to, sealant works, fixing, fastening, welding etc. The Hight of the awning as per drawings or 3.5 meter if not mentioned. The final location or several locations of awning will be fixed during the shop drawing phase and as instructed by the supervision engineer, the Contractor shall not claim for additional cost or object.	m2	25		
30.2.3	<b>Handicap Ramp Works:</b> Supply and Build handicap ramp made from Reinforced Concrete. The price shall include excavation, backfilling, reinstatement, demolish of all obstacles, steel reinforcement, reinforced concrete for ground beam and slab, hollow block wall, 5 cm natural stone tiles, compacted base Corse etc., in accordance with the drawings, details, specifications and to the instructions of the supervision engineer. Handrails of 50mm steel pipes and to include Fixing completely, oil paint three coats in addition to primer coat the hand rails are to be on both sides of the ramp. Price to also include chakered plate, and PVC rubber to the height 2m to the columns. The Contractor to submit shop drawings and details to be approved by the Engineers. Price includes cleaning, plastering and painting the wall adjacent to the newly installed ramp.	L.S	1		

30.2.4	<b>Rehabilitation of Area around the facility (Floor and stairs Tiles)</b> Supply and Install Non-Slip Coloured Ceramic Floor Tiles. First choice and free from all defect grade "A". (Approved by Palestine Standards Institution). Price to include sand with cement filling (Grade B-100), pointing with white cement and cleaning on site, removal of the old tiles, levelling and all the necessary work to complete the job in accordance with the instructions of the supervision engineer.	M2	30		
30.3	<b>Construction of New Handicap WASH unit</b>				
<b>A. Civil Works</b>					
30.3.1	Site clearance of any type of stairs, reinforced concrete, trees, branches, rocks, etc. in order to start the work. While keeping the trees intact and safe in order to re-plant the trees in a suitable place in accordance with the supervision engineer and to his approval.	L.S	1.0		
30.3.2	Excavation for foundations and/or ground beam in any kind of soil or rock to the dimensions and levels shown in the drawings. (from N.G.L to bottom of hardcore layer) Price to include removal of extra and unsuitable soil to approved location. The price shall include reinstatement of any damage occurred during excavation. All as per drawings and specifications and supervision instructions.	M3	1.60		
30.3.3	Import and fill with selected Imported Approved Fill; to the required levels and where directed by the Engineer. Filling shall be on layers not to exceed 20cm. thick. Price to include levelling, watering and compacting to 98 % field density and all related works according to drawings and specifications and engineer instructions. The contractor to backfill using excavated soil if suitable or imported approved material.	M3	1.6		
30.3.4	Supply and Well Compact 40cm thick Base Coarse as per drawing compacted to min.98% of maximum dry density of modified Proctor, in layers 20cm thick. Price includes levelling, watering, levelling and compacting of ground (sub-base) under base coarse to min. 98% according to Field Density Test. Under foundation	M2	1.5		
30.3.5	Blinding Concrete grade 'B200' With a minimum cement content of 250 Kg. per cubic meter under footings and tie beams and where required, Thickness not less than 10cm thick, should be according to drawings. Price to include all required work according to specifications and drawings and engineer instruction.	M2	1.5		
30.3.6	Supply and Cast Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include shuttering, reinforcing , painting with two coats of hot bitumen (75/25) (for the buried parts) and all related works according to drawings and specifications and engineer instructions. For the foundations	M3	0.6		
30.3.7	Supply and Cast Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include shuttering, reinforcing , painting with two coats of hot bitumen (75/25) (for the buried parts) and all related works according to drawings and specifications and engineer instructions. For the ground beams	M3	1.5		
30.3.8	Supply and Cast Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include shuttering, reinforcing and all related works according to drawings and specifications and engineer instructions. For the columns	M3	1.4		

30.3.9	Supply and Cast 10 cm of Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include shuttering, reinforcing , painting with two coats of hot bitumen (75/25) (for the buried parts) and all related works according to drawings and specifications and engineer instructions. For the slab on grade	M2	6.5		
30.3.10	Supply and Cast 20 cm Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include shuttering, reinforcing , painting with two coats of hot bitumen (75/25) (for the buried parts) and all related works according to drawings and specifications and engineer instructions. For the solid slab including beams and drop beams	M2	7.0		
30.3.11	Supply and Build Concrete Block Walls, 'Grade 35' of any size blocks single or cavity . the measurements will be to one side only all done according to the dwg. specifications and Engineer instructions and approval. Hollow blocks 20 cm thick for the walls of the toilet. Price shall also include Supply and Cast Reinforced Concrete Grade 'B250 With a minimum cement content of 300 Kg. per cubic meter. Price also to include shuttering, reinforcing 4Ø10 and stirrups 1Ø8@25cm, and all related works according to drawings and specifications and engineer instructions. For the beams 20cmX 20cm above Hollow blocks	M <sup>2</sup>	30.0		
30.3.12	supply and install two Coats of Cement and Sand Plaster over one slurry coat to walls and ceilings and where required for External plastering. price include Waterproofing additive (W 290) with the second and last face and painting with standard approved colour Waterproofing supercyl for External walls of the existing structure at the entrance. Price to also include 2 coats of external painting (supercryle). To the toilets.	M <sup>2</sup>	40.0		
30.3.13	Supply and paint three coats polycide paint for ceilings including corridor ceilings of high quality (Approved by Palestine Standards Institution) and by the supervision engineer.	M <sup>2</sup>	6.5		
30.3.14	Supply and paint high quality emulsion paint, for top walls and internal drop beams (sides and bottom), on one priming coat and two finishing coats, using two coats of complete putty, as per satisfaction of the supervisor engineer.	M <sup>2</sup>	8		
30.3.15	Supply & paint three coats of external quality waterproofing supercrylic paint for Corridors (walls) and parapet wall according to drawings and specifications.	M <sup>2</sup>	30		
30.3.16	Supply and Fix Factory-made Steel Doors as per drawings, specification. Price to include frame (door) (as per details), fixing completely, ironmongery, cylinders, cylindrical locks handles (Approved by Palestine Standards Institution). 6 mm. glazing, gaskets, oil Paint in three coats in addition to two primer coats. A 40cm x 40cm sign made of Metal shall be fixed on the door. The sign should be coloured and the icon and writing to be assigned by the supervision engineer, Dimensions: 1m *2.0m	No.	1		
30.3.17	Supply and Install Non-Slip Coloured Ceramic Floor Tiles Thickness 0.6 cm. First choice and free from all defect grade "A". (Approved by Palestine Standards Institution). Price to include sand with cement filling (Grade B-100), pointing with white cement and cleaning on site, removal of the old tiles, levelling and all the necessary work to complete the job in accordance with the instructions of the supervision engineer.	M <sup>2</sup>	7		

30.3.18	Supply and Install White Glazed or coloured Ceramic Wall Tiles Thickness 0.6 cm, First choice European type and free from all defects Grade "A". (Approved by Palestine Standards Institution). Price to include white round aluminium edges patching around services. Two coats of epoxy pointing ..All works shall be in accordance with drawings and specifications.	M <sup>2</sup>	12.5		
30.3.19	Supply, fix and operate non sliding Aluminium Windows extrusion Section 7700 or equal, with protective electrostatic applied polyester powder paint of 70-80 microns. Price to include 6.38mm thick laminated glass (3+0.38+3mm) for double glass. float glazing and all other accessories and fittings to complete works as per drawings and specifications. Dimensions of 0.7X 0.6 m Price shall include the steel protection from outside made of steel frame and steel wire mesh. Price shall also include painting, fixing etc.	No.	0.5		
30.3.20	Supply and apply app waterproofing membrane of bitumen rolls. (4 mm. of reinforced polyester sheets) covered with layer of white chipping, over roof slab and around parapets with overlaps of not less than 10 cm. Price to include primer coats of approval source according to specifications and engineer's instructions.	M <sup>2</sup>	6.5		
30.3.21	Supply and install Local marble threshold for under Doors and under windows 3-4 cm thickness	m2	2		
<b>B. Electrical Works</b>					
	Preamble: All Supplied Materials Should be Local Made (if available), Grade A and Free From Defects, Having Supervisor Certificate From Palestinian Standard Institution (PSI). Price to include submittal and obtaining approval of shop drawings, detailed and as-built drawings for all works as well as coordinating the same with the other services, activities and furniture. Price to include, also, submittal of catalogues and manufacturer instruction. Fixtures and appliances shall be measured in number. Supply and feeder Cables, cable conduits and cable trays shall not be measured but included in DB's prices Manholes, handholds and the like shall be measured in number. All Systems and devices shall be in lump sum including installation, testing and commissioning. Rates of fixtures and appliances shall include installation, wiring, switches and conduit works. All systems equipment (Class A and approved by Palestine Standards Institution)				
30.3.22	<b>Lighting points</b> Supply, Install and Connect Lighting Points including fire proof boxes fire proof Conduits, fire retardant (E90) 3*1.5 mm2 cables and 5*1.5mm2 for emergency kits, Light Switches, and all accessories as per drawings and specifications. Price to also include any necessary painting or tiling after connecting the points.	SET No.	1		
30.3.23	<b>Lighting fixtures</b> Supply, Install and Connect the following high frequency control gear Lighting Fixtures including P.F. correction capacitors, Lamps, installation for all lighting fixtures using galvanized iron chains to suspend the fixtures in the ceiling and all accessories as per drawings and specifications. Supply and install Surface mounted globe 13.5W/1100lm with metal based and opal diffuser, IP65.	SET No.	1		
30.3.24	<b>Main Electrical Connection</b> Supply, Install and Connect 5x6mm2 XLPE cable include 1Φ1.5" PVC conduit from MDB to the new Unit. Price shall also include excavation, any necessary painting, plastering or tiling after connecting the points.	L.M	15		
<b>C. Mechanical Works</b>					

	<p>Preamble. Supply networks pipes To Tanks, or from on roof feeding tanks to collectors shall be priced in Linear meter. Water tanks shall be measured in number. , Sanitary Fixtures shall be measured in number, price to include cold and hot water pipes supply and fittings to collectors, also to include drain supply , fittings connection, to manholes. Drains, Floor Traps, Clean outs and the like shall be measured in number.</p> <p>Internal sanitary sewers network shall be included in the rates of sanitary fixtures and appliances. and the sanitary fixtures includes the cost of poexgol pipes for basins, toilets, science lab basins, home economics basins, ..etc., price also includes the connection to drainage network of these fixtures in sanitary units and labs. Vents and vertical stacks shall measured in linear meter. Manhole, Galleys and the like shall be measured</p>				
30.3.25	<p>Supply and Install White Vitreous Western type handicapped Toilet (Class A and approved by Palestine Standards Institution) Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings, accessories movable handle and fixed handle as shown on drawings and in Specifications. as per specifications , drawing and as directed by supervision Engineer.</p>	Complete Set	1		
30.3.26	<p>Supply and Install White Vitreous China handicapped Wash Basin(sliding type) (Class A and approved by Palestine Standards Institution), size (40 * 56) cm. Complete with all fittings, valves, waste pipes to nearest floor trap, taps or mixer (Class A and approved by Palestine Standards Institution), connection to water distribution, traps, and any other necessary parts as Specification and as directed by Eng. Price includes supplying and installing 40x60cm mirror. Gear tap.</p>	Complete Set	1		
30.3.27	<p>Supply and install 3/4" diameter pipe schedule 40 galvanized steel pipes with all necessary fittings such as elbows Tees, unions, air vents, supports, hangers, shields, saddles, plastic tape etc. All piping hung on shafts, or in riser, and in sanitary block are measured in meter run. All pipes imbedded in walls or in site external shall be coated with layers of extruded polyethylene. All pipe joints imbedded in walls shall be coated with thick asphalt layer, all hot water pipes shall be insulated with polyethylene and to be cladded on roof. Price to also include any necessary painting or tiling after connecting the points. The works shall include bring the water from the nearest source.</p>	L.M	15		
30.3.28	<p>Supply and install 6" UPVC pipes SN8 heavy duty, at least (4.9mm) thick, Local Made or equal and must be approved by Palestine Standard Institution, between manholes in with all required materials, sockets, fittings , rubber seals, elbow, etc. The price includes excavation ,backfilling of at least 15 cm sand above , below and around the pipes including back-filling of selected material above the sand, and disposal of surplus excavated materials. Excavation shall be to any depth, width, and in any type of soil or rock, connection for internal sewerage network to connect to existing or proposed new sewage network or the septic tank and insulation of septic tank wall after connection.</p>	L.M	8		
30.3.31	<p>Supply and install 4" galvanized vertical pipes heavy duty for rain water, Local Made or equal and must be approved by Palestine Standard Institution. Price includes digging for pipes, supports, hangers , and all rubber joints and sealants, and rainwater pipe end outlets from roof to ground.</p>	L.M	4		
30.3.32	<p>Heavy duty stainless steel 4" floor drain syphon trap with screw type screen and with closed covers for urinals , all of approved brand , complete with all required fittings and connections using reduced "T" for connecting sanitary fixtures, the traps in stairs to be with closed cover</p>	No	1		

<b>30.3.33</b>	Supply and Install of Precast Concrete Manholes with minimum 15cm wall thickness for sewage and storm water drainage In compliance with specifications and Drawings. Price shall include excavation to any depth according to slopes, B200 reinforced concrete for base, back filling, cement plaster, benching, 8 or 25Ton Cast Iron cover as indicated , drop if needed, and all necessary works. all as shown in drawings, specifications, and approval of supervisor engineer. a. Ø60cm, 8 ton C.I cover	NO.	1		
<b>30.3.34</b>	Supply and Install Polyethylene White, domestic Water Tank. Capacity 1500 lit. "With Quality approval Tag" Including well painted steel balustrade support , automatic copper float valve, isolating valves, drain valve, fittings, vents, screwed cover, piping and connections till main cold water piping and all accessories; all according to the engineers' instructions and approval, the mounting of the tanks should be according to details including special bracing and flexible connections, painted steel base and what is required to complete the work. The price shall also include Steel structure with 2 meter hight to carry the tank safely.	No.	1		
<b>30.3.35</b>	Supply and install floor cleanout 4" UPVC including stainless steel (sraled type) cover (15*15cm) complete with connection to drain pipes as located in drawings, specifications and approval of supervisor engineer	No.	1		
<b>Total Bir Al Basha Secondary Girls School (NIS)</b>					

BILLS OF QUANTITIES					
CONSULTANT: Universal Group for Engineering and Consulting			DATE: March 2023		
Fahme co-ed School					
ITEM No.	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (ILS)	AMOUNT (ILS)
31.1	Preliminary Items				
31.1.1	Supply and installation of the project marble sign (110 cm x 70cm) that include coloured project information. The Contractor shall do the design and fix the sign as per the supervision engineer instructions. The price shall include fixing the sign properly with all required drilling, jumbo bolts, rehabilitation of any damages occurred during fixation.	No.	1		
31.2	External Works				
31.2.1	<b>Awning Works</b> Supply and install steel awning at one location or several location as per the detail in the drawing and as per supervision engineer. The price shall also include all steel tubes (columns, horizontal, vertical etc.), steel corrugated sheets, drain gutters, steel bolts, excavation, backfilling, reinforced concrete foundations, reinstatement, 3 Inch galvanized Steel rain water, painting, the fixation, joints, angles and whatever necessary to complete the work in accordance with the drawings, specifications and to the approval of the supervision engineer. Price to include any required works including but not limited to, sealant works, fixing, fastening, welding etc. The Hight of the awning as per drawings or 3.5 meter if not mentioned. The final location or several locations of awning will be fixed during the shop drawing phase and as instructed by the supervision engineer, the Contractor shall not claim for additional cost or object.	m2	25		
31.3	Septic Tank (Conditional Item)				
31.3.1	Supply and cast and build Septic Tank and Interceptor as per the details in the drawings. Price to include: a. Excavation, in any type of soil, to the required depth and dimension shown in the drawings. Removal of extra and / or unsuitable soil. B. Back filling as per specifications and levelling of site around the structures to the levels shown in the drawings with approved imported selected fill. C. Base Coarse average 20cm thickness including watering, levelling and compacting of ground (sub-base) under base coarse to min 95% according to Field Density Test. D. Cast in Place concrete grade B-200 for blinding under foundations and walls. R. concrete Grade B-300, for foundations, beams, walls, suspended slabs and walls of pit compartment of interceptor and the like as per detailed drawings. Including any treatments needed. F. Reinforcement Steel Bars in shape, length and diameter detailed on the drawings and approved shop drawings and bar bending schedule. G. Three Coats of Plaster to walls and ceiling of Percolating Pit and Interceptor. Trowel smoothened plaster. Including waterproof additives. H. Heavy duty fixed cat ladders, of 3/4 inch galvanized steel pipes. Including rustproof paint and primer complete. I. Cast Iron Cover in number and size as shown in the drawings of heavy weight not less than 50 KG. J. All necessary fittings and works to complete works as per drawings and specifications. Note: Cement of all concrete works and plaster shall be of Sulfate resisting cement.	L.S	1		



31.3.2	<p>Supply and install 8" UPVC pipes SN8 heavy duty, Local Made or equal and must be approved by Palestine Standard Institution, between manholes in with all required materials, sockets, fittings , rubber seals, elbow, etc. The price includes excavation ,backfilling of at least 15 cm sand above , below and around the pipes including back-filling of selected material above the sand, and disposal of surplus excavated materials. Excavation shall be to any depth, width, and in any type of soil or rock, connection for internal sewerage network to connect to existing or proposed new sewage network or the septic tank and insulation of septic tank wall after connection.</p>	L.M	14		
31.3.3	<p>Supply and Install of Precast Concrete Manholes with minimum 15cm wall thickness for sewage and storm water drainage In compliance with specifications and Drawings. Price shall include excavation to any depth according to slopes, B200 reinforced concrete for base, back filling, cement plaster, benching, 8 or 25Ton Cast Iron cover as indicated , drop if needed, and all necessary works. all as shown in drawings, specifications, and approval of supervisor engineer. a. Ø60cm, 8 ton C.I cover</p>	NO.	2		
Total Fahme co-ed School (NIS)					

BILLS OF QUANTITIES					
CONSULTANT: Universal Group for Engineering and Consulting			DATE: March 2023		
Sanur Secondary Boys School					
ITEM No.	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (ILS)	AMOUNT (ILS)
32.1	Preliminary Items				
32.1.1	Supply and installation of the project marble sign (110 cm x 70cm) that include coloured project information. The Contractor shall do the design and fix the sign as per the supervision engineer instructions. The price shall include fixing the sign properly with all required drilling, jumboo bolts, rehabilitation of any damages occurred during fixation.	No.	1		
32.1.2	Demolishing works inside the WASH facilities (WCs) that intersects with the designed structure in accordance with the drawings. The price shall include remove all demolished materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
32.1.3	Remove carefully works inside the WASH facilities (WCs). The price shall include but not limited to remove carefully, main doors, WC doors, sinks, wash basins, lighting Points, Collectors, accessories, taps, etc. all as per drawings, and Engineer instructions. The Contractor shall transport all removed materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
32.1.4	<b>Door and windows Opening in Reinforced Concrete or Hollow Block</b> Allow for every expenses to make a door opening in RE concrete wall. The price shall also include all needed works to complete the works as per drawings, specifications and engineer instructions. The Contractor shall transport all removed materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
32.2	External Works				
32.2.1	<b>Drinking Fountain Works:</b> Remove the old Drinking Fountain and Supply and install outside drinking fountain as shown on drawings, rate includes, sink 6.35X0.75m on block stands, the work should be finished and completed to the highest standard. Rate include excavation, B200 R. concrete (all steel reinforcement required), stone works, plastering, glazing tiles, local marble coping, planters and metal cover with all fittings, 12 unit high quality (Class A and approved by Palestine Standards Institution) chrome plated taps of approved kind, rates also include p.v.c. Drainpipe outlet to green area or as per drawings.	L.S	1		
32.2.2	<b>Awning Works</b> Supply and install steel awning at one location or several location as per the detail in the drawing and as per supervision engineer. The price shall also include all steel tubes (columns, horizontal, vertical etc.), steel corrugated sheets, drain gutters, steel bolts, excavation, backfilling, reinforced concrete foundations, reinstatement, 3 Inch galvanized Steel rain water, painting, the fixation, joints, angles and whatever necessary to complete the work in accordance with the drawings, specifications and to the approval of the supervision engineer. Price to include any required works including but not limited to, sealant works, fixing, fastening, welding etc. The Hight of the awning as per drawings or 3.5 meter if not mentioned. The final location or several locations of awning will be fixed during the shop drawing phase and as instructed by the supervision engineer, the Contractor shall not claim for additional cost or object.	m2	25		

32.2.3	<p><b>Handicap Ramp Works:</b>  Supply and Build handicap ramp made from Reinforced Concrete. The price shall include excavation, backfilling, reinstatement, demolish of all obstacles, steel reinforcement, reinforced concrete for ground beam and slab, hollow block wall, 5 cm natural stone tiles, compacted base Corse etc., in accordance with the drawings, details, specifications and to the instructions of the supervision engineer. Handrails of 50mm steel pipes and to include Fixing completely, oil paint three coats in addition to primer coat the hand rails are to be on both sides of the ramp. Price to also include chakered plate, and PVC rubber to the height 2m to the columns. The Contractor to submit shop drawings and details to be approved by the Engineers. Price includes cleaning, plastering and painting the wall adjacent to the newly installed ramp.</p>	L.S	1		
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<b>32.3</b>	<b>Rehabilitation of existing WASH unit</b>				
<b>A. Civil Works</b>					
<b>32.3.1</b>	Supply and Build Concrete Block Walls, 'Grade 35' of any size blocks single or cavity. The measurements will be to one side only all done according to the dwg. specifications and Engineer instructions and approval. Hollow blocks 10 cm thick for the partition walls. Price shall also include Supply and Cast Reinforced Concrete Grade 'B250 With a minimum cement content of 300 Kg. per cubic meter. Price also to include shuttering, reinforcing 4Ø10 and stirrups 1Ø8@25cm, and all related works according to drawings and specifications and engineer instructions. For the beams 20cmX 10cm above Hollow blocks	M <sup>2</sup>	6.0		
<b>32.3.2</b>	Supply and paint three coats polycide paint for ceilings including corridor ceilings of high quality (Approved by Palestine Standards Institution) and by the supervision engineer.	M <sup>2</sup>	70		
<b>32.3.3</b>	Supply and paint high quality emulsion paint, for top walls and internal drop beams (sides and bottom), on one priming coat and two finishing coats, using two coats of complete putty, as per satisfaction of the supervisor engineer.	M <sup>2</sup>	30		
<b>32.3.4</b>	Supply and Fix Factory-made Steel Doors as per drawings, specification. Price to include frame (door) (as per details), fixing completely, ironmongery, cylinders, cylindrical locks handles (Approved by Palestine Standards Institution). 6 mm. glazing, gaskets, oil Paint in three coats in addition to two primer coats. A 40cm x 40cm sign made of Metal shall be fixed on the door. The sign should be coloured and the icon and writing to be assigned by the supervision engineer, Dimensions: 1m *2.0m	No.	3		
<b>32.3.5</b>	Supply and Install Non-Slip Coloured Ceramic Floor Tiles Thickness 0.6 cm. First choice and free from all defect grade "A". (Approved by Palestine Standards Institution). Price to include sand with cement filling (Grade B-100), pointing with white cement and cleaning on site, removal of the old tiles, levelling and all the necessary work to complete the job in accordance with the instructions of the supervision engineer.	M <sup>2</sup>	70		
<b>32.3.6</b>	Supply and Install White Glazed or coloured Ceramic Wall Tiles Thickness 0.6 cm, First choice European type and free from all defects Grade "A". (Approved by Palestine Standards Institution). Price to include white round aluminium edges patching around services. Two coats of epoxy pointing ..All works shall be in accordance with drawings and specifications.	M <sup>2</sup>	220		
<b>32.3.7</b>	Supply, fix and operate non sliding Aluminium Windows extrusion Section 7700 or equal, with protective electrostatic applied polyester powder paint of 70-80 microns. Price to include 6.38mm thick laminated glass (3+0.38+3mm) for double glass. float glazing and all other accessories and fittings to complete works as per drawings and specifications. Price shall include the steel protection from outside made of steel frame and steel wire mesh. Price shall also include painting, fixing etc.	M <sup>2</sup>	8.0		
<b>32.3.8</b>	Supply and install Local marble threshold for under Doors and under windows 3-4 cm thickness. All as per drawings, specifications and supervision engineer.	L.S	1		

32.3.9	Supply and Fix Wooden Doors 4.5 cm Thick single or double sashes. With (Frame),(4.5*3.5) cm hardwood (Zan) edging and (3.5*9.5) cm soft wood stile. Edge strip banding of width 4.5 mm. Formica over veneer on both sides, colour for frames and Architrave as directed by engineer. Door paneling to be soft wood 4.5*3.5 cm. each 4 cm., frames of galvanized steel sheet frame of 2mm thick for corridor doors ( as per drawings), width according to the wall thickness' and Allowance of 4 - 6 cm. thickness for plastering and tiling purposes, immersed in wood preservative before erection then embedded completely in sand - cement mortar and completely anchored as per specification. Architrave of Hardwood (Swedish)(4*1.2)cm, price to include ironmongery, kick plates of aluminium 20cm height from one side for main bath room doors, U shaped 10cm height from both sides at the bottom for internal doors kick plates of aluminium 20cm height for bath room doors, U shaped both sides, and at the bottom door stoppers, transparent fiber glass 6mm thick for both upper vision panel & for vision panel inside door leaf, gaskets cylindrical Lock ((Approved by Palestine Standards Institution), and painting in three coats of oil paint in addition to primer coat. Price includes also aluminium louvers of 50x60cm in the bottom for store doors. All as per Detailed Drawings, specification. Size as per drawings	No.	13		
<b>B. Electrical Works</b>					
	Preamble: All Supplied Materials Should be Local Made (if available), Grade A and Free From Defects, Having Supervisor Certificate From Palestinian Standard Institution (PSI). Price to include submittal and obtaining approval of shop drawings, detailed and as-built drawings for all works as well as coordinating the same with the other services, activities and furniture. Price to include, also, submittal of catalogues and manufacturer instruction. Fixtures and appliances shall be measured in number. Supply and feeder Cables, cable conduits and cable trays shall not be measured but included in DB's prices Manholes, handholds and the like shall be measured in number. All Systems and devices shall be in lump sum including installation, testing and commissioning. Rates of fixtures and appliances shall include installation, wiring, switches and conduit works. All systems equipment (Class A and approved by Palestine Standards Institution)				
32.3.10	<b>Lighting points</b> Supply, Install and Connect Lighting Points including fire proof boxes fire proof Conduits, fire retardant (E90) 3*1.5 mm2 cables and 5*1.5mm2 for emergency kits, Light Switches, and all accessories as per drawings and specifications. Price to also include any necessary painting or tiling after connecting the points.	SET No.	13		
32.3.11	<b>Lighting fixtures</b> Supply, Install and Connect the following high frequency control gear Lighting Fixtures including P.F. correction capacitors, Lamps, installation for all lighting fixtures using galvanized iron chains to suspend the fixtures in the ceiling and all accessories as per drawings and specifications. Supply and install Surface mounted Type A or Type B as per drawings	SET No.	13		
<b>C. Mechanical Works</b>					

	<p>Preamble. Supply networks pipes To Tanks, or from on roof feeding tanks to collectors shall be priced in Linear meter. Water tanks shall be measured in number. , Sanitary Fixtures shall be measured in number, price to include cold and hot water pipes supply and fittings to collectors, also to include drain supply , fittings connection, to manholes. Drains, Floor Traps, Clean outs and the like shall be measured in number.</p> <p>Internal sanitary sewers network shall be included in the rates of sanitary fixtures and appliances. and the sanitary fixtures includes the cost of poexgol pipes for basins, toilets, science lab basins, home economics basins, ..etc., price also includes the connection to drainage network of these fixtures in sanitary units and labs. Vents and vertical stacks shall measured in linear meter. Manhole, Galleys and the like shall be measured in number. External sewers pipes shall be measured in linear meter for each individual diameter and material. Rates of all fittings , fixtures , appliances and pipe laying shall include:- Supply of material, workmanship, installation, testing and commissioning. Rates to include also all peace's and fittings, including by passes , floats, cleaning outlets , automatic vents, vents and stack covers, valves and non return valves and the like needed to complete works as per specifications. Insulation and painting as called for in specifications. Excavation and cutting for all pipe laying works, bedding back filling and all works connected with pipe laying. All ties, sleeves, joints, tie bolts and rods, brackets and the like. Rates to include Workshops, Coordinated and as- built drawings as approved by the Engineer. , the contractor should submit best quality, approved two brands for each mechanical works items for approval, and should be approved by PSI, any cut in blocks for installations should be done using special cutting machine, (all mechanical materials as sanitary fixtures fixtures, devices should be Italy made, Germany, Spanish made or equivalent )</p>				
<b>32.3.12</b>	<p>Replace existing and Supply &amp; Install Porcelain W.C. bowl class "A" white or coloured , (Italy, Spanish made or equivalent) with heavy duty seat and cover. Price includes plastic flush tank, hanging iron steel bracket, bolts and nuts, as well as flexible flush hose , valve, porcelain paper holder, connection to pexogol pipe, connection to drainage and all related materials. Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include complete removal of the old toilets, replacement of any broken tiles, broken valves and then supplying new Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings as per specifications , drawing and as directed by supervision engineer.</p>	Complete Set	13		
<b>32.3.13</b>	<p>Supply &amp; Install Porcelain wall hung wash basin white or coloured engineer of size 50 x 45 cm of approved brand (Italy, Spanish made or equivalent), Price shall include chromium plated mixer with chromium plated handle mounted on wall. the price also includes connection to Pexogol pipe, liquide soap holder , and all fixation and hanging bracket. Price includes supplying and installing 40x60cm mirror., semi pedestal and all other required materials, including connection to drainage system.</p>	Complete Set	11		
<b>32.3.14</b>	<p>Supply and Install White Vitreous Western type handicapped Toilet (Class A and approved by Palestine Standards Institution) Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings, accessories movable handle and fixed handle as shown on drawings and in Specifications. as per specifications , drawing and as directed by supervision Engineer.</p>	Complete Set	1		
<b>32.3.15</b>	<p>Supply and Install White Vitreous China handicapped Wash Basin(sliding type) (Class A and approved by Palestine Standards Institution), size (40 * 56) cm. Complete with all fittings, valves, waste pipes to nearest floor trap, taps or mixer (Class A and approved by Palestine Standards Institution), connection to water distribution, traps, and any other necessary parts as Specification and as directed by Eng. Price includes supplying and installing 40x60cm mirror. Gear tap.</p>	Complete Set	1		

<b>32.3.16</b>	Supply and install wall/window type exhaust fans of approved manufacture (European type or equal) complete with self – act automatic shutter. Price includes galvanized ducts, grills, shutter and making necessary holes in walls or glass and fixing, and wiring cables all as per specifications, and approval of supervisor engineer. The fan shall have it is own electrical wiring inside walls or ceiling, one socket/key etc. The price shall include any excavation, painting, plastering etc. all as shown in drawings, specifications, and approval of supervisor engineer. Extract Fan, 100 CFM	No.	6		
<b>32.3.17</b>	Supply and install wall/window type exhaust fans of approved manufacture (European type or equal) complete with self – act automatic shutter. Price includes galvanized ducts, grills, shutter and making necessary holes in walls or glass and fixing, and wiring cables all as per specifications, and approval of supervisor engineer. The fan shall have it is own electrical wiring inside walls or ceiling, one socket/key etc. The price shall include any excavation, painting, plastering etc. all as shown in drawings, specifications, and approval of supervisor engineer. Extract Fan, 400 CFM IN LINE	No.	2		
<b>32.3.18</b>	Supply and install floor cleanout 4" UPVC including stainless steel (sraled type) cover (15*15cm) complete with connection to drain pipes as located in drawings, specifications and approval of supervisor engineer	No.	1		
<b>Total Sanur Secondary Boys School (NIS)</b>					

BILLS OF QUANTITIES					
CONSULTANT: Universal Group for Engineering and Consulting			DATE: March 2023		
Sirees Preparatory Girls School					
ITEM No.	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (ILS)	AMOUNT (ILS)
33.1	Preliminary Items				
33.1.1	Supply and installation of the project marble sign (110 cm x 70cm) that include coloured project information. The Contractor shall do the design and fix the sign as per the supervision engineer instructions. The price shall include fixing the sign properly with all required drilling, jumboo bolts, rehabilitation of any damages occurred during fixation.	No.	1		
33.1.2	Allow for every cost and work to Empty and clean out the existing septic tank from wastewater and seal the septic tank all as per supervision engineer instructions.	L.S	1		
33.1.4	Allow for every cost and work to secure access to the site. The price shall include all needed works such (remove any obstacles or walls etc.) to allow access to the site for the Contractor machines and manpower etc. The Contractor shall reinstate any damage he occurs during implementation and any structure he demolish to its original conditions.	L.S	1		
33.2	External Works				
33.2.1	<u>Awning Works</u> Supply and install steel awning at one location or several location as per the detail in the drawing and as per supervision engineer. The price shall also include all steel tubes (columns, horizontal, vertical etc.), steel corrugated sheets, drain gutters, steel bolts, excavation, backfilling, reinforced concrete foundations, reinstatement, 3 Inch galvanized Steel rain water, painting, the fixation, joints, angles and whatever necessary to complete the work in accordance with the drawings, specifications and to the approval of the supervision engineer. Price to include any required works including but not limited to, sealant works, fixing, fastening, welding etc. The Hight of the awning as per drawings or 3.5 meter if not mentioned. The final location or several locations of awning will be fixed during the shop drawing phase and as instructed by the supervision engineer, the Contractor shall not claim for additional cost or object.	m2	25		
33.2.2	<u>Seal KG playground Area with Steel Cage</u> Supply and install steel at one location or several location as per the detail in the drawing and as per supervision engineer. The price shall also include all steel tubes (columns, horizontal, vertical etc.), excavation, backfilling, reinforced concrete foundations, reinstatement, painting, the fixation, joints, angles and whatever necessary to complete the work in accordance with the drawings, specifications and to the approval of the supervision engineer. Price to include any required works including but not limited to, sealant works, fixing, fastening, welding etc. The final location will be fixed during the shop drawing phase and as instructed by the supervision engineer, the Contractor shall not claim for additional cost or object.	m2	70		



33.2.3	<p><b>Access Door for the KG playground Area (Steel Cage)</b></p> <p>Supply and install steel Access Door (2X1m) as per the detail in the drawing and as per supervision engineer. The price shall also include all steel tubes (columns, horizontal, vertical etc.), door, frame, locker excavation, backfilling, reinforced concrete foundations, reinstatement, painting, the fixation, joints, angles and whatever necessary to complete the work in accordance with the drawings, specifications and to the approval of the supervision engineer. Price to include any required works including but not limited to, sealant works, fixing, fastening, welding etc. The final location will be fixed during the shop drawing phase and as instructed by the supervision engineer, the Contractor shall not claim for additional cost or object.</p>	No.	1		
33.4	<b>Septic Tank</b>				
33.4.1	<p>Supply and cast and build Septic Tank and Interceptor as per the details in the drawings. Price to include:</p> <p>a. Excavation, in any type of soil, to the required depth and dimension shown in the drawings. Removal of extra and / or unsuitable soil.</p> <p>B. Back filling as per specifications and levelling of site around the structures to the levels shown in the drawings with approved imported selected fill.</p> <p>C. Base Coarse average 20cm thickness including watering, levelling and compacting of ground (sub-base) under base coarse to min 95% according to Field Density Test.</p> <p>D. Cast in Place concrete grade B-200 for blinding under foundations and walls.</p> <p>R. concrete Grade B-300, for foundations, beams, walls, suspended slabs and walls of pit compartment of interceptor and the like as per detailed drawings. Including any treatments needed.</p> <p>F. Reinforcement Steel Bars in shape, length and diameter detailed on the drawings and approved shop drawings and bar bending schedule.</p> <p>G. Three Coats of Plaster to walls and ceiling of Percolating Pit and Interceptor. Trowel smoothened plaster. Including waterproof additives.</p> <p>H. Heavy duty fixed cat ladders, of 3/4 inch galvanized steel pipes. Including rustproof paint and primer complete.</p> <p>I. Cast Iron Cover in number and size as shown in the drawings of heavy weight not less than 50 KG.</p> <p>J. All necessary fittings and works to complete works as per drawings and specifications.</p> <p>Note: Cement of all concrete works and plaster shall be of Sulfate resisting cement.</p>	L.S	1		
33.4.2	<p>Supply and install 6" UPVC pipes SN8 heavy duty, at least (4.9mm) thick, Local Made or equal and must be approved by Palestine Standard Institution, between manholes in with all required materials, sockets, fittings, rubber seals, elbow, etc. The price includes excavation, backfilling of at least 15 cm sand above, below and around the pipes including back-filling of selected material above the sand, and disposal of surplus excavated materials. Excavation shall be to any depth, width, and in any type of soil or rock, connection for internal sewerage network to connect to existing or proposed new sewage network or the septic tank and insulation of septic tank wall after connection.</p>	L.M	15		
33.4.3	<p>Supply and Install of Precast Concrete Manholes with minimum 15cm wall thickness for sewage and storm water drainage In compliance with specifications and Drawings. Price shall include excavation to any depth according to slopes, B200 reinforced concrete for base, back filling, cement plaster, benching, 8 or 25Ton Cast Iron cover as indicated, drop if needed, and all necessary works. all as shown in drawings, specifications, and approval of supervisor engineer. a. Ø60cm, 8 ton C.I cover</p>	NO.	3		
<b>Total Sirees Preparatory Girls School (NIS)</b>					

BILLS OF QUANTITIES					
CONSULTANT: Universal Group for Engineering and Consulting			DATE: March 2023		
Fandaqumiye Secondary Girls School					
ITEM No.	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (ILS)	AMOUNT (ILS)
34.1	Preliminary Items				
34.1.1	Supply and installation of the project marble sign (110 cm x 70cm) that include coloured project information. The Contractor shall do the design and fix the sign as per the supervision engineer instructions. The price shall include fixing the sign properly with all required drilling, jumbo bolts, rehabilitation of any damages occurred during fixation.	No.	1		
34.1.2	Demolishing works inside the WASH facilities (WCs) that intersects with the designed structure in accordance with the drawings. The price shall include remove all demolished materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
34.1.3	Remove carefully works inside the WASH facilities (WCs). The price shall include but not limited to remove carefully, main doors, WC doors, sinks, wash basins, lighting Points, Collectors, accessories, taps, etc. all as per drawings, and Engineer instructions. The Contractor shall transport all removed materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
34.1.4	Demolishing works of existing stairs in accordance with the drawings. The price shall also includes demolish or removal of all obstacles, excavation, levelling etc. all as per drawings, and supervision engineer instructions. The price shall include remove all demolished materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
34.1.5	Allow for every cost and work to Empty and clean out the existing septic tank from wastewater and seal the septic tank all as per supervision engineer instructions.	L.S	1		
34.1.6	External Works				
34.2.1	<u>Awning Works</u> Supply and install steel awning at one location or several location as per the detail in the drawing and as per supervision engineer. The price shall also include all steel tubes (columns, horizontal, vertical etc.), steel corrugated sheets, drain gutters, steel bolts, excavation, backfilling, reinforced concrete foundations, reinstatement, 3 galvanized Steel PVC rain water, painting, the fixation, joints, angles and whatever necessary to complete the work in accordance with the drawings, specifications and to the approval of the supervision engineer. Price to include any required works including but not limited to, sealant works, fixing, fastening, welding etc. The Hight of the awning as per drawings or 3.5 meter if not mentioned. The final location or several locations of awning will be fixed during the shop drawing phase and as instructed by the supervision engineer, the Contractor shall not claim for additional cost or object.	m2	25		

34.2.2	<p><b><u>Drinking Fountain Works:</u></b> Remove the old Drinking Fountain and Supply and install outside drinking fountain as shown on drawings, rate includes, sink 8.35X0.75m on block stands, the work should be finished and completed to the highest standard. Rate include excavation, B200 R. concrete (all steel reinforcement required), stone works, plastering, glazing tiles, local marble coping, planters and metal cover with all fittings, 16 unit high quality (Class A and approved by Palestine Standards Institution) chrome plated taps of approved kind, rates also include p.v.c. Drainpipe outlet to green area or as per drawings.</p>	L.S	1		
34.2.3	<p><b><u>Handicap Ramp Works to the WASH Facility:</u></b> Supply and Build handicap ramp made from Reinforced Concrete. The price shall include excavation, backfilling, reinstatement, demolish of all obstacles, steel reinforcement, reinforced concrete for ground beam and slab, hollow block wall, 5 cm natural stone tiles, compacted base Corse etc., in accordance with the drawings, details, specifications and to the instructions of the supervision engineer. Handrails of 50mm steel pipes and to include Fixing completely, oil paint three coats in addition to primer coat the hand rails are to be on both sides of the ramp. Price to also include chakered plate, and PVC rubber to the height 2m to the columns. The Contractor to submit shop drawings and details to be approved by the Engineers. Price includes cleaning, plastering and painting the wall adjacent to the newly installed ramp.</p>	L.S	1		
34.2.4	<p><b><u>Stairs Works to the WASH Facility:</u></b> Supplying of all required materials, casting and erecting reinforced concrete STAIRS composed of (B 350) concrete and steel Reinforcement with yield stress (<math>f_y=4200\text{kg/cm}^2</math>), Price shall include, but not limited to structural excavation (if needed) and structural backfilling (if needed), 10cm blinding B200, ituminous painting to surfaces permanently in contact with backfilled material and base course (40cm) under stairs compacted on two layers 20 cm each. All according to specifications, drawings, and directions of the Engineer. Price to also include parapet wall as per drawings. Price shall include all the necessary work as per the drawings including all the above.</p>	m3	3.5		

<b>34.3</b>	<b>Rehabilitation of existing WASH units</b>				
<b>A. Civil Works</b>					
<b>34.3.1</b>	Supply and Build Concrete Block Walls, 'Grade 35' of any size blocks single or cavity. The measurements will be to one side only all done according to the dwg. specifications and Engineer instructions and approval. Hollow blocks 10 cm thick for the partition walls. Price shall also include Supply and Cast Reinforced Concrete Grade 'B250 With a minimum cement content of 300 Kg. per cubic meter. Price also to include shuttering, reinforcing 4Ø10 and stirrups 1Ø8@25cm, and all related works according to drawings and specifications and engineer instructions. For the beams 20cmX 10cm above Hollow blocks	M <sup>2</sup>	42.0		
<b>34.3.2</b>	Supply and paint three coats polycide paint for ceilings including corridor ceilings of high quality (Approved by Palestine Standards Institution) and by the supervision engineer.	M <sup>2</sup>	40		
<b>34.3.3</b>	Supply and paint high quality emulsion paint, for top walls and internal drop beams (sides and bottom), on one priming coat and two finishing coats, using two coats of complete putty, as per satisfaction of the supervisor engineer.	M <sup>2</sup>	20		
<b>34.3.4</b>	Supply and Fix Factory-made Steel Doors as per drawings, specification. Price to include frame (door) (as per details), fixing completely, ironmongery, cylinders, cylindrical locks handles (Approved by Palestine Standards Institution). 6 mm. glazing, gaskets, oil Paint in three coats in addition to two primer coats. A 40cm x 40cm sign made of Metal shall be fixed on the door. The sign should be coloured and the icon and writing to be assigned by the supervision engineer, Dimensions: 1m *2.0m	No.	2		
<b>34.3.5</b>	Supply and Install Non-Slip Coloured Ceramic Floor Tiles Thickness 0.6 cm. First choice and free from all defect grade "A". (Approved by Palestine Standards Institution). Price to include sand with cement filling (Grade B-100), pointing with white cement and cleaning on site, removal of the old tiles, levelling and all the necessary work to complete the job in accordance with the instructions of the supervision engineer.	M <sup>2</sup>	36		
<b>34.3.6</b>	Supply and Install White Glazed or coloured Ceramic Wall Tiles Thickness 0.6 cm, First choice European type and free from all defects Grade "A". (Approved by Palestine Standards Institution). Price to include white round aluminium edges patching around services. Two coats of epoxy pointing ..All works shall be in accordance with drawings and specifications.	M <sup>2</sup>	140		
<b>34.3.7</b>	Supply, fix and operate non sliding Aluminium Windows extrusion Section 7700 or equal, with protective electrostatic applied polyester powder paint of 70-80 microns. Price to include 6.38mm thick laminated glass (3+0.38+3mm) for double glass. float glazing and all other accessories and fittings to complete works as per drawings and specifications. Price shall include the steel protection from outside made of steel frame and steel wire mesh. Price shall also include painting, fixing etc.	M <sup>2</sup>	2.0		
<b>34.3.8</b>	Supply and install Local marble threshold for under Doors and under windows 3-4 cm thickness. All as per drawings, specifications and supervision engineer.	L.S	1		

34.3.9	<p>Supply and Fix Wooden Doors 4.5 cm Thick single or double sashes. With (Frame),(4.5*3.5) cm hardwood (Zan) edging and (3.5*9.5) cm soft wood stile. Edge strip banding of width 4.5 mm. Formica over veneer on both sides, colour for frames and Architrave as directed by engineer. Door paneling to be soft wood 4.5*3.5 cm. each 4 cm., frames of galvanized steel sheet frame of 2mm thick for corridor doors ( as per drawings), width according to the wall thickness' and Allowance of 4 - 6 cm. thickness for plastering and tiling purposes, immersed in wood preservative before erection then embedded completely in sand - cement mortar and completely anchored as per specification. Architrave of Hardwood (Swedish)(4*1.2)cm, price to include ironmongery, kick plates of aluminium 20cm height from one side for main bath room doors, U shaped 10cm height from both sides at the bottom for internal doors kick plates of aluminium 20cm height for bath room doors, U shaped both sides, and at the bottom door stoppers, transparent fiber glass 6mm thick for both upper vision panel &amp; for vision panel inside door leaf, gaskets cylindrical Lock ((Approved by Palestine Standards Institution), and painting in three coats of oil paint in addition to primer coat. Price includes also aluminium louvers of 50x60cm in the bottom for store doors. All as per Detailed Drawings, specification. Size as per drawings</p>	No.	11		
<b>B. Electrical Works</b>					
	<p>Preamble: All Supplied Materials Should be Local Made (if available), Grade A and Free From Defects, Having Supervisor Certificate From Palestinian Standard Institution (PSI).</p> <p>Price to include submittal and obtaining approval of shop drawings, detailed and as-built drawings for all works as well as coordinating the same with the other services, activities and furniture.</p> <p>Price to include, also, submittal of catalogues and manufacturer instruction. Fixtures and appliances shall be measured in number. Supply and feeder Cables, cable conduits and cable trays shall not be measured but included in DB's prices</p> <p>Manholes, handholds and the like shall be measured in number. All Systems and devices shall be in lump sum including installation, testing and commissioning.</p> <p>Rates of fixtures and appliances shall include installation, wiring, switches and conduit works.</p> <p>All systems equipment (Class A and approved by Palestine Standards Institution)</p>				
34.3.10	<p><b>Lighting points</b></p> <p>Supply, Install and Connect Lighting Points including fire proof boxes fire proof Conduits, fire retardant (E90) 3*1.5 mm2 cables and 5*1.5mm2 for emergency kits, Light Switches, and all accessories as per drawings and specifications. Price to also include any necessary painting or tiling after connecting the points.</p>	SET No.	6		
34.3.11	<p><b>Lighting fixtures</b></p> <p>Supply, Install and Connect the following high frequency control gear Lighting Fixtures including P.F. correction capacitors, Lamps, installation for all lighting fixtures using galvanized iron chains to suspend the fixtures in the ceiling and all accessories as per drawings and specifications. Supply and install Surface mounted Type A or Type B as per drawings</p>	SET No.	6		
<b>C. Mechanical Works</b>					

	<p>Preamble. Supply networks pipes To Tanks, or from on roof feeding tanks to collectors shall be priced in Linear meter. Water tanks shall be measured in number. , Sanitary Fixtures shall be measured in number, price to include cold and hot water pipes supply and fittings to collectors, also to include drain supply , fittings connection, to manholes. Drains, Floor Traps, Clean outs and the like shall be measured in number.</p> <p>Internal sanitary sewers network shall be included in the rates of sanitary fixtures and appliances. and the sanitary fixtures includes the cost of pexogol pipes for basins, toilets, science lab basins, home economics basins, ..etc., price also includes the connection to drainage network of these fixtures in sanitary units and labs. Vents and vertical stacks shall measured in linear meter. Manhole, Galleys and the like shall be measured in number. External sewers pipes shall be measured in linear meter for each individual diameter and material. Rates of all fittings , fixtures , appliances and pipe laying shall include:- Supply of material, workmanship, installation, testing and commissioning. Rates to include also all peace's and fittings, including by passes , floats, cleaning outlets , automatic vents, vents and stack covers, valves and non return valves and the like needed to complete works as per specifications. Insulation and painting as called for in specifications. Excavation and cutting for all pipe laying works, bedding back filling and all works connected with pipe laying. All ties, sleeves, joints, tie bolts and rods, brackets and the like. Rates to include Workshops, Coordinated and as- built drawings as approved by the Engineer. , the contractor should submit best quality, approved two brands for each mechanical works items for approval, and should be approved by PSI, any cut in blocks for installations should be done using special cutting machine, (all mechanical materials as sanitary fixtures fixtures, devices should be Italy made, Germany, Spanish made or equivalent )</p>				
34.3.12	<p>Remove the old toilets and supply &amp; Install Porcelain W.C. bowl class "A" white or coloured , (Italy, Spanish made or equivalent) with heavy duty seat and cover. Price includes plastic flush tank, hanging iron steel bracket, bolts and nuts, as well as flexible flush hose , valve, porcelain paper holder, connection to pexogol pipe, connection to drainage and all related materials. Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include complete removal of the old toilets, replacement of any broken tiles, broken valves and then supplying new Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings as per specifications , drawing and as directed by supervision engineer.</p>	Complete Set	11		
34.3.13	<p>Supply &amp; Install Porcelain wall hung wash basin white or coloured engineer of size 50 x 45 cm of approved brand (Italy, Spanish made or equivalent), Price shall include chromium plated mixer with chromium plated handle mounted on wall. the price also includes connection to Pexogol pipe, liquide soap holder , and all fixation and hanging bracket. Price includes supplying and installing 40x60cm mirror., semi pedestal and all other required materials, including connection to drainage system.</p>	Complete Set	5		
34.3.14	<p>Supply and Install White Vitreous Western type handicapped Toilet (Class A and approved by Palestine Standards Institution) Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings, accessories movable handle and fixed handle as shown on drawings and in Specifications. as per specifications , drawing and as directed by supervision Engineer.</p>	Complete Set	1		
34.3.15	<p>Supply and Install White Vitreous China handicapped Wash Basin(sliding type) (Class A and approved by Palestine Standards Institution), size (40 * 56) cm. Complete with all fittings, valves, waste pipes to nearest floor trap, taps or mixer (Class A and approved by Palestine Standards Institution), connection to water distribution, traps, and any other necessary parts as Specification and as directed by Eng. Price includes supplying and installing 40x60cm mirror. Gear tap.</p>	Complete Set	1		

<b>34.3.16</b>	Supply and install 6" UPVC pipes SN8 heavy duty, at least (4.9mm) thick, Local Made or equal and must be approved by Palestine Standard Institution, between manholes in with all required materials, sockets, fittings, rubber seals, elbow, etc. The price includes excavation, backfilling of at least 15 cm sand above, below and around the pipes including back-filling of selected material above the sand, and disposal of surplus excavated materials. Excavation shall be to any depth, width, and in any type of soil or rock, connection for internal sewerage network to connect to existing or proposed new sewage network or the septic tank and insulation of septic tank wall after connection.	L.M	10		
<b>34.3.17</b>	Supply, install and test Copper Collectors 3/4" dia., of approved brand. Price shall include all openings (eyes), and shall include for the required copper adaptors, hangers, supports, ties, air vents. Collectors shall be installed on walls, as shown on drawings. The work shall be completed as specified and according to the Engineer's instructions.	L.S	1		
<b>34.3.18</b>	Supply and install wall/window type exhaust fans of approved manufacture (European type or equal) complete with self – act automatic shutter. Price includes galvanized ducts, grills, shutter and making necessary holes in walls or glass and fixing, and wiring cables all as per specifications, and approval of supervisor engineer. The fan shall have it is own electrical wiring inside walls or ceiling, one socket/key etc. The price shall include any excavation, painting, plastering etc. all as shown in drawings, specifications, and approval of supervisor engineer. Extract Fan, 100 CFM	No.	2		
<b>34.4</b>	<b>Rehabilitation of existing WASH units</b>				
<b>34.4.1</b>	Supply and cast and build Septic Tank and Interceptor as per the details in the drawings. Price to include: a. Excavation, in any type of soil, to the required depth and dimension shown in the drawings. Removal of extra and / or unsuitable soil. B. Back filling as per specifications and levelling of site around the structures to the levels shown in the drawings with approved imported selected fill. C. Base Coarse average 20cm thickness including watering, levelling and compacting of ground (sub-base) under base coarse to min 95% according to Field Density Test. D. Cast in Place concrete grade B-200 for blinding under foundations and walls. R. concrete Grade B-300, for foundations, beams, walls, suspended slabs and walls of pit compartment of interceptor and the like as per detailed drawings. Including any treatments needed. F. Reinforcement Steel Bars in shape, length and diameter detailed on the drawings and approved shop drawings and bar bending schedule. G. Three Coats of Plaster to walls and ceiling of Percolating Pit and Interceptor. Trowel smoothened plaster. Including waterproof additives. H. Heavy duty fixed cat ladders, of 3/4 inch galvanized steel pipes. Including rustproof paint and primer complete. I. Cast Iron Cover in number and size as shown in the drawings of heavy weight not less than 50 KG. J. All necessary fittings and works to complete works as per drawings and specifications. Note: Cement of all concrete works and plaster shall be of Sulfate resisting cement.	L.S	1		
<b>Total Fandaqumiye Secondary Girls School (NIS)</b>					

BILLS OF QUANTITIES					
CONSULTANT: Universal Group for Engineering and Consulting			DATE: March 2023		
Biddo Elementary Boys School					
ITEM No.	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (ILS)	AMOUNT (ILS)
39.1	Preliminary Items				
39.1.1	Supply and installation of the project marble sign (110 cm x 70cm) that include coloured project information. The Contractor shall do the design and fix the sign as per the supervision engineer instructions. The price shall include fixing the sign properly with all required drilling, jumboo bolts, rehabilitation of any damages occurred during fixation.	No.	1		
39.1.2	Demolishing works inside the WASH facilities (WCs) that intersects with the designed structure in accordance with the drawings. The price shall include remove all demolished materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
39.1.3	Remove carefully works inside the WASH facilities (WCs). The price shall include but not limited to remove carefully, main doors, WC doors, sinks, wash basins, lighting Points, Collectors, accessories, taps, etc. all as per drawings, and Engineer instructions. The Contractor shall transport all removed materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
39.1.4	<b>Reduce the level of the Ground in the WASH unit</b> Allow for every expenses to reduce the levels of the ground to be as per specifications. The price shall also include all needed works to complete the works as per drawings, specifications and engineer instructions. The Contractor shall transport all removed materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
39.2	External Works				
39.2.1	<b>Drinking Fountain Works:</b> Remove the old Drinking Fountain and Supply and install outside drinking fountain as shown on drawings, rate includes, sink 7.35X0.75m on block stands, the work should be finished and completed to the highest standard. Rate include excavation, B200 R. concrete (all steel reinforcement required), stone works, plastering, glazing tiles, local marble coping, planters and metal cover with all fittings, 14 unit high quality (Class A and approved by Palestine Standards Institution) chrome plated taps of approved kind, rates also include p.v.c. Drainpipe outlet to green area or as per drawings.	L.S	1		
39.2.2	<b>Awning Works</b> Supply and install steel awning at one location or several location as per the detail in the drawing and as per supervision engineer. The price shall also include all steel tubes (columns, horizontal, vertical etc.), steel corrugated sheets, drain gutters, steel bolts, excavation, backfilling, reinforced concrete foundations, reinstatement, 3 Inch galvanized Steel rain water, painting, the fixation, joints, angles and whatever necessary to complete the work in accordance with the drawings, specifications and to the approval of the supervision engineer. Price to include any required works including but not limited to, sealant works, fixing, fastening, welding etc. The Hight of the awning as per drawings or 3.5 meter if not mentioned. The final location or several locations of awning will be fixed during the shop drawing phase and as instructed by the supervision engineer, the Contractor shall not claim for additional cost or object.	m2	25		
39.3	Rehabilitation and extension of Existing WASH unit				
A. Civil Works					



<b>39.3.1</b>	Supply and Build Concrete Block Walls, 'Grade 35' of any size blocks single or cavity. The measurements will be to one side only all done according to the dwg. specifications and Engineer instructions and approval. Hollow blocks 10 cm thick for the partition walls. Price shall also include Supply and Cast Reinforced Concrete Grade 'B250 With a minimum cement content of 300 Kg. per cubic meter. Price also to include shuttering, reinforcing 4Ø10 and stirrups 1Ø8@25cm , painting with two coats of hot bitumen (75/25) (for the buried parts) and all related works according to drawings and specifications and engineer instructions. For the beams 20cmX 10cm above Hollow blocks	M <sup>2</sup>	16.0		
<b>39.3.2</b>	Supply and paint three coats polycide paint for ceilings including corridor ceilings of high quality (Approved by Palestine Standards Institution) and by the supervision engineer.	M <sup>2</sup>	48		
<b>39.3.3</b>	Supply and paint high quality emulsion paint, for top walls and internal drop beams (sides and bottom), on one priming coat and two finishing coats, using two coats of complete putty, as per satisfaction of the supervisor engineer.	M <sup>2</sup>	20		
<b>39.3.4</b>	Supply and Fix Factory-made Steel Doors as per drawings, specification. Price to include frame ( door) (as per details), fixing completely, ironmongery, cylinders, cylindrical locks handles (Approved by Palestine Standards Institution). 6 mm. glazing, gaskets, oil Paint in three coats in addition to two primer coats. A 40cm x 40cm sign made of Metal shall be fixed on the door. The sign should be coloured and the icon and writing to be assigned by the supervision engineer,	No.	1		
<b>39.3.5</b>	Supply and Install Non-Slip Coloured Ceramic Floor Tiles Thickness 0.6 cm. First choice and free from all defect grade "A". (Approved by Palestine Standards Institution). Price to include sand with cement filling (Grade B-100), pointing with white cement and cleaning on site, removal of the old tiles, levelling and all the necessary work to complete the job in accordance with the instructions of the supervision engineer.	M <sup>2</sup>	46		
<b>39.3.6</b>	Supply and Install White Glazed or coloured Ceramic Wall Tiles Thickness 0.6 cm. First choice European type and free from all defects Grade "A". (Approved by Palestine Standards Institution). Price to include white round aluminium edges patching around services. Two coats of epoxy pointing ..All works shall be in accordance with drawings and specifications.	M <sup>2</sup>	115		
<b>39.3.7</b>	Supply, fix and operate non sliding Aluminium Windows extrusion Section 7700 or equal, with protective electrostatic applied polyester powder paint of 70-80 microns. Price to include 6.38mm thick laminated glass (3+0.38+3mm) for double glass. float glazing and all other accessories and fittings to complete works as per drawings and specifications. Price shall include the steel protection from outside made of steel frame and steel wire mesh. Price shall also include painting, fixing etc.	M <sup>2</sup>	4		
<b>39.3.8</b>	Supply and install Local marble threshold for under Doors and under windows 3-4 cm thickness. All as per drawings, specifications and supervision engineer.	m2	5		

39.3.9	Supply and Fix Wooden Doors 4.5 cm Thick single or double sashes. With (Frame),(4.5*3.5) cm hardwood (Zan) edging and (3.5*9.5) cm soft wood stile. Edge strip banding of width 4.5 mm. Formica over veneer on both sides, colour for frames and Architrave as directed by engineer. Door paneling to be soft wood 4.5*3.5 cm. each 4 cm., frames of galvanized steel sheet frame of 2mm thick for corridor doors ( as per drawings), width according to the wall thickness' and Allowance of 4 - 6 cm. thickness for plastering and tiling purposes, immersed in wood preservative before erection then embedded completely in sand - cement mortar and completely anchored as per specification. Architrave of Hardwood (Swedish)(4*1.2)cm, price to include ironmongery, kick plates of aluminium 20cm height from one side for main bath room doors, U shaped 10cm height from both sides at the bottom for internal doors kick plates of aluminium 20cm height for bath room doors, U shaped both sides, and at the bottom door stoppers, transparent fiber glass 6mm thick for both upper vision panel & for vision panel inside door leaf, gaskets cylindrical Lock ((Approved by Palestine Standards Institution), and painting in three coats of oil paint in addition to primer coat. Price includes also aluminium louvers of 50x60cm in the bottom for store doors. All as per Detailed Drawings, specification. Size as per drawings	No.	8		
39.3.10	Supply and Fix Wooden Doors 4.5 cm Thick single or double sashes. With Hardwood (Zan) Frame size (4.5*3.5) cm, and (3.5*9.5) cm soft wood stile. Edge strip banding of width 4.5 mm. Plywood veneer 5mm Thick on both sides. Door paneling to be soft wood 4.5*3.5 cm. each 4 cm. Frame of galvanized steel sheet frame of 2mm thick, width according to the wall thickness' and Allowance of 4 - 6 cm. thickness for plastering and tiling purposes, immersed in wood preservative before erection then embedded completely in sand - cement mortar and completely anchored as per specification. Price to include all the works including ironmongery, cylinders, locks, handles and paint.	No.	1		
<b>B. Electrical Works</b>					
	<p>Preamble: All Supplied Materials Should be Local Made (if available), Grade A and Free From Defects, Having Supervisor Certificate From Palestinian Standard Institution (PSI).</p> <p>Price to include submittal and obtaining approval of shop drawings, detailed and as-built drawings for all works as well as coordinating the same with the other services, activities and furniture.</p> <p>Price to include, also, submittal of catalogues and manufacturer instruction. Fixtures and appliances shall be measured in number. Supply and feeder Cables, cable conduits and cable trays shall not be measured but included in DB's prices</p> <p>Manholes, handholds and the like shall be measured in number. All Systems and devices shall be in lump sum including installation, testing and commissioning.</p> <p>Rates of fixtures and appliances shall include installation, wiring, switches and conduit works.</p> <p>All systems equipment (Class A and approved by Palestine Standards Institution)</p>				
39.3.11	<p><b>Lighting points</b></p> <p>Supply, Install and Connect Lighting Points including fire proof boxes fire proof Conduits, fire retardant (E90) 3*1.5 mm2 cables and 5*1.5mm2 for emergency kits, Light Switches, and all accessories as per drawings and specifications. Price to also include any necessary painting or tiling after connecting the points.</p>	SET No.	7		
39.3.12	<p><b>Lighting fixtures</b></p> <p>Supply, Install and Connect the following high frequency control gear Lighting Fixtures including P.F. correction capacitors, Lamps, installation for all lighting fixtures using galvanized iron chains to suspend the fixtures in the ceiling and all accessories as per drawings and specifications. Supply and install Surface mounted Type A or Type B as per drawings</p>	SET No.	7		
<b>C. Mechanical Works</b>					

	<p>Preamble. Supply networks pipes To Tanks, or from on roof feeding tanks to collectors shall be priced in Linear meter. Water tanks shall be measured in number. , Sanitary Fixtures shall be measured in number, price to include cold and hot water pipes supply and fittings to collectors, also to include drain supply , fittings connection, to manholes. Drains, Floor Traps, Clean outs and the like shall be measured in number.</p> <p>Internal sanitary sewers network shall be included in the rates of sanitary fixtures and appliances. and the sanitary fixtures includes the cost of poexgol pipes for basins, toilets, science lab basins, home economics basins, ..etc., price also includes the connection to drainage network of these fixtures in sanitary units and labs. Vents and vertical stacks shall measured in linear meter. Manhole, Galleys and the like shall be measured in number. External sewers pipes shall be measured in linear meter for each individual diameter and material. Rates of all fittings , fixtures , appliances and pipe laying shall include:- Supply of material, workmanship, installation, testing and commissioning. Rates to include also all peace's and fittings, including by passes , floats, cleaning outlets , automatic vents, vents and stack covers, valves and non return valves and the like needed to complete works as per specifications. Insulation and painting as called for in specifications. Excavation and cutting for all pipe laying works, bedding back filling and all works connected with pipe laying. All ties, sleeves, joints, tie bolts and rods, brackets and the like. Rates to include Workshops, Coordinated and as- built drawings as approved by the Engineer. , the contractor should submit best quality, approved two brands for each mechanical works items for approval, and should be approved by PSI, any cut in blocks for installations should be done using special cutting machine, (all mechanical materials as sanitary fixtures fixtures, devices should be Italy made, Germany, Spanish made or equivalent )</p>				
39.3.13	<p>Supply &amp; Install Porcelain W.C. bowl class "A" white or coloured , (Italy, Spanish made or equivalent) with heavy duty seat and cover. Price includes plastic flush tank, hanging iron steel bracket, bolts and nuts, as well as flexible flush hose , valve, porcelain paper holder, connection to pexogol pipe, connection to drainage and all related materials. Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include complete removal of the old toilets, replacement of any broken tiles, broken valves and then supplying new Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings as per specifications , drawing and as directed by supervision engineer.</p>	Complete Set	8		
39.3.14	<p>Supply &amp; Install Porcelain wall hung wash basin white or coloured engineer of size 50 x 45 cm of approved brand (Italy, Spanish made or equivalent), Price shall include chromium plated mixer with chromium plated handle mounted on wall. the price also includes connection to Pexogol pipe, liquide soap holder , and all fixation and hanging bracket. Price includes supplying and installing 40x60cm mirror., semi pedestal and all other required materials, including connection to drainage system.</p>	Complete Set	9		
39.3.15	<p>Supply and Install White Vitreous Western type handicapped Toilet (Class A and approved by Palestine Standards Institution) Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings, accessories movable handle and fixed handle as shown on drawings and in Specifications. as per specifications , drawing and as directed by supervision Engineer.</p>	Complete Set	1		
39.3.16	<p>Supply and Install White Vitreous China handicapped Wash Basin(sliding type) (Class A and approved by Palestine Standards Institution), size (40 * 56) cm. Complete with all fittings, valves, waste pipes to nearest floor trap, taps or mixer (Class A and approved by Palestine Standards Institution), connection to water distribution, traps, and any other necessary parts as Specification and as directed by Eng. Price includes supplying and installing 40x60cm mirror. Gear tap.</p>	Complete Set	1		
39.3.17	<p>Supply, install and test Copper Collectors 3/4" dia., of approved brand. Price shall include all openings (eyes), and shall include for the required copper adaptors, hangers, supports, ties, air vents. Collectors shall be installed on walls, as shown on drawings. The work shall be completed as specified and according to the Engineer's instructions.</p>	L.S	1		

39.3.18	Supply and install wall/window type exhaust fans of approved manufacture (European type or equal) complete with self – act automatic shutter. Price includes galvanized ducts, grills, shutter and making necessary holes in walls or glass and fixing, and wiring cables all as per specifications, and approval of supervisor engineer. The fan shall have it is own electrical wiring inside walls or ceiling, one socket/key etc. The price shall include any excavation, painting, plastering etc. all as shown in drawings, specifications, and approval of supervisor engineer. Extract Fan, 100 CFM	No.	6		
39.3.19	Supply and install floor cleanout 4" UPVC including stainless steel (sraled type) cover (15*15cm) complete with connection to drain pipes as located in drawings, specifications and approval of supervisor engineer	No.	2		
39.4	Rehabilitation of WASH unit # 2				
<b>A. Civil Works</b>					
39.4.1	Supply and paint three coats polycide paint for ceilings including corridor ceilings of high quality (Approved by Palestine Standards Institution) and by the supervision engineer.	M <sup>2</sup>	16.0		
39.4.2	Supply and paint high quality emulsion paint, for top walls and internal drop beams (sides and bottom), on one priming coat and two finishing coats, using two coats of complete putty, as per satisfaction of the supervisor engineer.	M <sup>2</sup>	12		
39.4.3	Supply and Fix Factory-made Steel Doors as per drawings, specification. Price to include frame ( door) (as per details), ironmongery, cylinders, cylindrical locks handles (Approved by Palestine Standards Institution). 6 mm. glazing, gaskets, oil Paint in three coats in addition to two primer coats. A 40cm x 40cm sign made of Metal shall be fixed on the door. The sign should be coloured and the icon and writing to be assigned by the supervision engineer, Dimensions: 1m *2.0m	No.	1		
<b>C. Mechanical Works</b>					
	Preamble. Supply networks pipes To Tanks, or from on roof feeding tanks to collectors shall be priced in Linear meter. Water tanks shall be measured in number. , Sanitary Fixtures shall be measured in number, price to include cold and hot water pipes supply and fittings to collectors, also to include drain supply , fittings connection, to manholes. Drains, Floor Traps, Clean outs and the like shall be measured in number. Internal sanitary sewers network shall be included in the rates of sanitary fixtures and appliances. and the sanitary fixtures includes the cost of poexgol pipes for basins, toilets, science lab basins, home economics basins, ..etc., price also includes the connection to drainage network of these fixtures in sanitary units and labs. Vents and vertical stacks shall measured in linear meter. Manhole, Galleys and the like shall be measured in number. External sewers pipes shall be measured in linear meter for each individual diameter and material. Rates of all fittings , fixtures , appliances and pipe laying shall include:- Supply of material, workmanship, installation, testing and commissioning. Rates to include also all peace's and fittings, including by passes , floats, cleaning outlets , automatic vents, vents and stack covers, valves and non return valves and the like needed to complete works as per specifications. Insulation and painting as called for in specifications. Excavation and cutting for all pipe laying works, bedding back filling and all works connected with pipe laying. All ties, sleeves, joints, tie bolts and rods, brackets and the like. Rates to include Workshops, Coordinated and as- built drawings as approved by the Engineer. , the contractor should submit best quality, approved two brands for each mechanical works items for approval, and should be approved by PSI, any cut in blocks for installations should be done using special cutting machine, (all mechanical materials as sanitary fixtures fixtures, devices should be Italy made, Germany, Spanish made or equivalent )				

<b>39.4.4</b>	Supply & Install Porcelain W.C. bowl class "A" white or coloured , (Italy, Spanish made or equivalent) with heavy duty seat and cover. Price includes plastic flush tank, hanging iron steel bracket, bolts and nuts, as well as flexible flush hose , valve, porcelain paper holder, connection to pexogol pipe, connection to drainage and all related materials. Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include complete removal of the old toilets, replacement of any broken tiles, broken valves and then supplying new Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings as per specifications , drawing and as directed by supervision engineer.	Complete Set	2		
<b>39.4.5</b>	Supply & Install Porcelain wall hung wash basin white or coloured engineer of size 50 x 45 cm of approved brand (Italy, Spanish made or equivalent), Price shall include chromium plated mixer with chromium plated handle mounted on wall. the price also includes connection to Pexogol pipe, porcelain soap holder , and all fixation and hanging bracket. Price includes supplying and installing 40x60cm mirror., semi pedestal and all other required materials, including connection to drainage system.	Complete Set	2		
<b>Total Biddo Elementary Boys School (NIS)</b>					

BILLS OF QUANTITIES					
CONSULTANT: Universal Group for Engineering and Consulting			DATE: March 2023		
Ibn Kahldoun Elementary Boys School					
ITEM No.	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (ILS)	AMOUNT (ILS)
40.1	Preliminary Items				
40.1.1	Supply and installation of the project marble sign (110 cm x 70cm) that include coloured project information. The Contractor shall do the design and fix the sign as per the supervision engineer instructions. The price shall include fixing the sign properly with all required drilling, jumbo bolts, rehabilitation of any damages occurred during fixation.	No.	1		
40.1.2	Demolishing works inside the WASH facilities (WCs) that intersects with the designed structure in accordance with the drawings. The price shall include remove all demolished materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
40.1.3	Remove carefully works inside the WASH facilities (WCs). The price shall include but not limited to remove carefully, main doors, WC doors, sinks, wash basins, lighting Points, Collectors, accessories, taps, etc. all as per drawings, and Engineer instructions. The Contractor shall transport all removed materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
40.2	External Works				
40.2.1	<b>Drinking Fountain Works:</b> Remove the old Drinking Fountain and Supply and install outside drinking fountain as shown on drawings, rate includes, sink 7.5X0.75m on block stands, the work should be finished and completed to the highest standard. Rate include excavation, B200 R. concrete (all steel reinforcement required), stone works, plastering, glazing tiles, local marble coping, planters and metal cover with all fittings, 14 unit high quality (Class A and approved by Palestine Standards Institution) chrome plated taps of approved kind, rates also include p.v.c. Drainpipe outlet to green area or as per drawings.	L.S	1		
40.2.2	<b>Awning Works</b> Supply and install steel awning at one location or several location as per the detail in the drawing and as per supervision engineer. The price shall also include all steel tubes (columns, horizontal, vertical etc.), steel corrugated sheets, drain gutters, steel bolts, excavation, backfilling, reinforced concrete foundations, reinstatement, 3 Inch galvanized Steel rain water, painting, the fixation, joints, angles and whatever necessary to complete the work in accordance with the drawings, specifications and to the approval of the supervision engineer. Price to include any required works including but not limited to, sealant works, fixing, fastening, welding etc. The Hight of the awning as per drawings or 3.5 meter if not mentioned. The final location or several locations of awning will be fixed during the shop drawing phase and as instructed by the supervision engineer, the Contractor shall not claim for additional cost or object.	m2	25		

40.2.3	<p><b>Handicap Ramp Works:</b> Supply and Build handicap ramp made from Reinforced Concrete. The price shall include excavation, backfilling, reinstatement, demolish of all obstacles, steel reinforcement, reinforced concrete for ground beam and slab, hollow block wall, 5 cm natural stone tiles, compacted base Corse etc., in accordance with the drawings, details, specifications and to the instructions of the supervision engineer. Handrails of 50mm steel pipes and to include Fixing completely, oil paint three coats in addition to primer coat the hand rails are to be on both sides of the ramp. Price to also include chakered plate, and PVC rubber to the height 2m to the columns. The Contractor to submit shop drawings and details to be approved by the Engineers. Price includes cleaning, plastering and painting the wall adjacent to the newly installed ramp.</p>	L.S	1		
40.3	<b>Rehabilitation and extension of Existing WASH unit</b>				
<b>A. Civil Works</b>					
40.3.1	Supply and paint three coats polycide paint for ceilings including corridor ceilings of high quality (Approved by Palestine Standards Institution) and by the supervision engineer.	M <sup>2</sup>	48		
40.3.2	Supply and paint high quality emulsion paint, for top walls and internal drop beams (sides and bottom), on one priming coat and two finishing coats, using two coats of complete putty, as per satisfaction of the supervisor engineer.	M <sup>2</sup>	23		
40.3.3	Supply & paint three coats of external quality waterproofing supercyle paint for Corridors (walls) and parapet wall according to drawings and specifications.	M <sup>2</sup>	83		
40.3.4	Supply and Fix Factory-made Steel Doors as per drawings, specification. Price to include frame (door) (as per details), fixing completely, ironmongery, cylinders, cylindrical locks handles (Approved by Palestine Standards Institution). 6 mm. glazing, gaskets, oil Paint in three coats in addition to two primer coats. A 40cm x 40cm sign made of Metal shall be fixed on the door. The sign should be coloured and the icon and writing to be assigned by the supervision engineer,	No.	2		
40.3.5	Supply and Install Non-Slip Coloured Ceramic Floor Tiles Thickness 0.6 cm. First choice and free from all defect grade "A". (Approved by Palestine Standards Institution). Price to include sand with cement filling (Grade B-100), pointing with white cement and cleaning on site, removal of the old tiles, levelling and all the necessary work to complete the job in accordance with the instructions of the supervision engineer.	M <sup>2</sup>	90		
40.3.6	Supply and Install White Glazed or coloured Ceramic Wall Tiles Thickness 0.6 cm, First choice European type and free from all defects Grade "A". (Approved by Palestine Standards Institution). Price to include white round aluminium edges patching around services. Two coats of epoxy pointing ..All works shall be in accordance with drawings and specifications.	M <sup>2</sup>	140		
40.3.7	Supply, fix and operate non sliding Aluminium Windows extrusion Section 7700 or equal, with protective electrostatic applied polyester powder paint of 70-80 microns. Price to include 6.38mm thick laminated glass (3+0.38+3mm) for double glass. float glazing and all other accessories and fittings to complete works as per drawings and specifications. Price shall include the steel protection from outside made of steel frame and steel wire mesh. Price shall also include painting, fixing etc.	M <sup>2</sup>	8		
40.3.8	Supply and install Local marble threshold for under Doors and under windows 3-4 cm thickness. All as per drawings, specifications and supervision engineer.	m2	5		

40.3.9	Supply and Fix Wooden Doors 4.5 cm Thick single or double sashes. With (Frame),(4.5*3.5) cm hardwood (Zan) edging and (3.5*9.5) cm soft wood stile. Edge strip banding of width 4.5 mm. Formica over veneer on both sides, colour for frames and Architrave as directed by engineer. Door paneling to be soft wood 4.5*3.5 cm. each 4 cm., frames of galvanized steel sheet frame of 2mm thick for corridor doors ( as per drawings), width according to the wall thickness' and Allowance of 4 - 6 cm. thickness for plastering and tiling purposes, immersed in wood preservative before erection then embedded completely in sand - cement mortar and completely anchored as per specification. Architrave of Hardwood (Swedish)(4*1.2)cm, price to include ironmongery, kick plates of aluminium 20cm height from one side for main bath room doors, U shaped 10cm height from both sides at the bottom for internal doors kick plates of aluminium 20cm height for bath room doors, U shaped both sides, and at the bottom door stoppers, transparent fiber glass 6mm thick for both upper vision panel & for vision panel inside door leaf, gaskets cylindrical Lock ((Approved by Palestine Standards Institution), and painting in three coats of oil paint in addition to primer coat. Price includes also aluminium louvers of 50x60cm in the bottom for store doors. All as per Detailed Drawings, specification. Size as per drawings	No.	8		
<b>B. Electrical Works</b>					
	Preamble: All Supplied Materials Should be Local Made (if available), Grade A and Free From Defects, Having Supervisor Certificate From Palestinian Standard Institution (PSI). Price to include submittal and obtaining approval of shop drawings, detailed and as-built drawings for all works as well as coordinating the same with the other services, activities and furniture. Price to include, also, submittal of catalogues and manufacturer instruction. Fixtures and appliances shall be measured in number. Supply and feeder Cables, cable conduits and cable trays shall not be measured but included in DB's prices Manholes, handholds and the like shall be measured in number. All Systems and devices shall be in lump sum including installation, testing and commissioning. Rates of fixtures and appliances shall include installation, wiring, switches and conduit works. All systems equipment (Class A and approved by Palestine Standards Institution)				
40.3.10	<b>Lighting points</b> Supply, Install and Connect Lighting Points including fire proof boxes fire proof Conduits, fire retardant (E90) 3*1.5 mm2 cables and 5*1.5mm2 for emergency kits, Light Switches, and all accessories as per drawings and specifications. Price to also include any necessary painting or tiling after connecting the points.	SET No.	7		
40.3.11	<b>Lighting fixtures</b> Supply, Install and Connect the following high frequency control gear Lighting Fixtures including P.F. correction capacitors, Lamps, installation for all lighting fixtures using galvanized iron chains to suspend the fixtures in the ceiling and all accessories as per drawings and specifications. Supply and install globe 34W/3700lm LED recessed modular panel with aluminium frame and opal diffuser, colour temp. 4000K UGR<19, IP40	SET No.	7		
<b>C. Mechanical Works</b>					



	<p>Preamble. Supply networks pipes To Tanks, or from on roof feeding tanks to collectors shall be priced in Linear meter. Water tanks shall be measured in number. , Sanitary Fixtures shall be measured in number, price to include cold and hot water pipes supply and fittings to collectors, also to include drain supply , fittings connection, to manholes. Drains, Floor Traps, Clean outs and the like shall be measured in number.</p> <p>Internal sanitary sewers network shall be included in the rates of sanitary fixtures and appliances. and the sanitary fixtures includes the cost of poexgol pipes for basins, toilets, science lab basins, home economics basins, ..etc., price also includes the connection to drainage network of these fixtures in sanitary units and labs. Vents and vertical stacks shall measured in linear meter. Manhole, Galleys and the like shall be measured in number. External sewers pipes shall be measured in linear meter for each individual diameter and material. Rates of all fittings , fixtures , appliances and pipe laying shall include:- Supply of material, workmanship, installation, testing and commissioning. Rates to include also all peace's and fittings, including by passes , floats, cleaning outlets , automatic vents, vents and stack covers, valves and non return valves and the like needed to complete works as per specifications. Insulation and painting as called for in specifications. Excavation and cutting for all pipe laying works, bedding back filling and all works connected with pipe laying. All ties, sleeves, joints, tie bolts and rods, brackets and the like. Rates to include Workshops, Coordinated and as- built drawings as approved by the Engineer. , the contractor should submit best quality, approved two brands for each mechanical works items for approval, and should be approved by PSI, any cut in blocks for installations should be done using special cutting machine, (all mechanical materials as sanitary fixtures fixtures, devices should be Italy made, Germany, Spanish made or equivalent )</p>				
40.3.12	<p>Supply &amp; Install Porcelain W.C. bowl class "A" white or coloured , (Italy, Spanish made or equivalent) with heavy duty seat and cover. Price includes plastic flush tank, hanging iron steel bracket, bolts and nuts, as well as flexible flush hose , valve, porcelain paper holder, connection to pexogol pipe, connection to drainage and all related materials. Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include complete removal of the old toilets, replacement of any broken tiles, broken valves and then supplying new Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings as per specifications , drawing and as directed by supervision engineer.</p>	Complete Set	9		
40.3.13	<p>Supply &amp; Install Porcelain wall hung wash basin white or coloured engineer of size 50 x 45 cm of approved brand (Italy, Spanish made or equivalent), Price shall include chromium plated mixer with chromium plated handle mounted on wall. the price also includes connection to Pexogol pipe, liquide soap holder , and all fixation and hanging bracket. Price includes supplying and installing 40x60cm mirror., semi pedestal and all other required materials, including connection to drainage system.</p>	Complete Set	7		
40.3.14	<p>Supply and install wall/window type exhaust fans of approved manufacture (European type or equal) complete with self – act automatic shutter. Price includes galvanized ducts, grills, shutter and making necessary holes in walls or glass and fixing, and wiring cables all as per specifications, and approval of supervisor engineer. The fan shall have it is own electrical wiring inside walls or ceiling, one socket/key etc. The price shall include any excavation, painting, plastering etc. all as shown in drawings, specifications, and approval of supervisor engineer. Extract Fan, 100 CFM</p>	No.	7		
40.3.15	<p>Supply and install floor cleanout 4" UPVC including stainless steel (sraled type) cover (15*15cm) complete with connection to drain pipes as located in drawings, specifications and approval of supervisor engineer</p>	No.	1		
40.4	Construction of New Handicap WASH unit				
A. Civil Works					

<b>40.4.1</b>	Site clearance of any type of stairs, reinforced concrete, trees, branches, rocks, etc. in order to start the work. While keeping the trees intact and safe in order to re-plant the trees in a suitable place in accordance with the supervision engineer and to his approval.	L.S	1.0		
<b>40.4.2</b>	Excavation for foundations and/or ground beam in any kind of soil or rock to the dimensions and levels shown in the drawings. (from N.G.L to bottom of hardcore layer) Price to include removal of extra and unsuitable soil to approved location. The price shall include reinstatement of any damage occurred during excavation. All as per drawings and specifications and supervision instructions.	M3	5.00		
<b>40.4.3</b>	Import and fill with selected Imported Approved Fill; to the required levels and where directed by the Engineer. Filling shall be on layers not to exceed 20cm. thick. Price to include levelling, watering and compacting to 98 % field density and all related works according to drawings and specifications and engineer instructions. The contractor to backfill using excavated soil if suitable or imported approved material.	M3	3.0		
<b>40.4.4</b>	Supply and Well Compact 40cm thick Base Coarse as per drawing compacted to min.98% of maximum dry density of modified Proctor, in layers 20cm thick. Price includes levelling, watering, levelling and compacting of ground (sub-base) under base coarse to min. 98% according to Field Density Test. Under foundation	M2	4.0		
<b>40.4.5</b>	Blinding Concrete grade 'B200' With a minimum cement content of 250 Kg. per cubic meter under footings and tie beams and where required, Thickness not less than 10cm thick, should be according to drawings. Price to include all required work according to specifications and drawings and engineer instruction.	M2	4.0		
<b>40.4.6</b>	Supply and Cast Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include shuttering, reinforcing , painting with two coats of hot bitumen (75/25) (for the buried parts) and all related works according to drawings and specifications and engineer instructions. For the foundations	M3	1.5		
<b>40.4.7</b>	Supply and Cast Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include shuttering, reinforcing , painting with two coats of hot bitumen (75/25) (for the buried parts) and all related works according to drawings and specifications and engineer instructions. For the ground beams	M3	2.0		
<b>40.4.8</b>	Supply and Cast Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include shuttering, reinforcing and all related works according to drawings and specifications and engineer instructions. For the columns	M3	1.4		
<b>40.4.9</b>	Supply and Cast 10 cm of Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include shuttering, reinforcing , painting with two coats of hot bitumen (75/25) (for the buried parts) and all related works according to drawings and specifications and engineer instructions. For the slab on grade	M2	6.0		
<b>40.4.10</b>	Supply and Cast 20 cm Reinforced Concrete Grade 'B350 With a minimum cement content of 400 Kg. per cubic meter. Price also to include shuttering, reinforcing , painting with two coats of hot bitumen (75/25) (for the buried parts) and all related works according to drawings and specifications and engineer instructions. For the solid slab including beams and drop beams	M2	6.0		

40.4.11	Supply and Build Concrete Block Walls, 'Grade 35' of any size blocks single or cavity . the measurements will be to one side only all done according to the dwg. specifications and Engineer instructions and approval. Hollow blocks 20 cm thick for the walls of the toilet. Price shall also include Supply and Cast Reinforced Concrete Grade 'B250 With a minimum cement content of 300 Kg. per cubic meter. Price also to include shuttering, reinforcing 4Ø10 and stirrups 1Ø8@25cm, and all related works according to drawings and specifications and engineer instructions. For the beams 20cmX 20cm above Hollow blocks	M <sup>2</sup>	29.0		
40.4.12	supply and install two Coats of Cement and Sand Plaster over one slurry coat to walls and ceilings and where required for External plastering. price include Waterproofing additive (W 290) with the second and last face and painting with standard approved colour Waterproofing supercyl for External walls of the existing structure at the entrance. Price to also include 2 coats of external painting (supercryle). To the toilets.	M <sup>2</sup>	35.0		
40.4.13	Supply and paint three coats polycide paint for ceilings including corridor ceilings of high quality (Approved by Palestine Standards Institution) and by the supervision engineer.	M <sup>2</sup>	6.0		
40.4.14	Supply and paint high quality emulsion paint, for top walls and internal drop beams (sides and bottom), on one priming coat and two finishing coats, using two coats of complete putty, as per satisfaction of the supervisor engineer.	M <sup>2</sup>	7		
40.4.15	Supply & paint three coats of external quality waterproofing supercyle paint for Corridors (walls) and parapet wall according to drawings and specifications.	M <sup>2</sup>	30		
40.4.16	Supply and Fix Factory-made Steel Doors as per drawings, specification. Price to include frame (door) (as per details), fixing completely, ironmongery, cylinders, cylindrical locks handles (Approved by Palestine Standards Institution). 6 mm. glazing, gaskets, oil Paint in three coats in addition to two primer coats. A 40cm x 40cm sign made of Metal shall be fixed on the door. The sign should be coloured and the icon and writing to be assigned by the supervision engineer, Dimensions: 1m *2.0m	No.	1		
40.4.17	Supply and Install Non-Slip Coloured Ceramic Floor Tiles Thickness 0.6 cm. First choice and free from all defect grade "A". (Approved by Palestine Standards Institution). Price to include sand with cement filling (Grade B-100), pointing with white cement and cleaning on site, removal of the old tiles, levelling and all the necessary work to complete the job in accordance with the instructions of the supervision engineer.	M <sup>2</sup>	6		

40.4.18	Supply and Install White Glazed or coloured Ceramic Wall Tiles Thickness 0.6 cm, First choice European type and free from all defects Grade "A". (Approved by Palestine Standards Institution). Price to include white round aluminium edges patching around services. Two coats of epoxy pointing ..All works shall be in accordance with drawings and specifications.	M <sup>2</sup>	22.0		
40.4.19	Supply, fix and operate non sliding Aluminium Windows extrusion Section 7700 or equal, with protective electrostatic applied polyester powder paint of 70-80 microns. Price to include 6.38mm thick laminated glass (3+0.38+3mm) for double glass. float glazing and all other accessories and fittings to complete works as per drawings and specifications. Dimensions of 0.7X 0.6 m Price shall include the steel protection from outside made of steel frame and steel wire mesh. Price shall also include painting, fixing etc.	No.	1.0		
40.4.20	Supply and apply app waterproofing membrane of bitumen rolls. (4 mm. of reinforced polyester sheets) covered with layer of white chipping, over roof slab and around parapets with overlaps of not less than 10 cm. Price to include primer coats of approval source according to specifications and engineer's instructions.	M <sup>2</sup>	6.0		
40.4.21	Supply and install Local marble threshold for under Doors and under windows 3-4 cm thickness	L.S	1		
<b>B. Electrical Works</b>					
	Preamble: All Supplied Materials Should be Local Made (if available), Grade A and Free From Defects, Having Supervisor Certificate From Palestinian Standard Institution (PSI). Price to include submittal and obtaining approval of shop drawings, detailed and as-built drawings for all works as well as coordinating the same with the other services, activities and furniture. Price to include, also, submittal of catalogues and manufacturer instruction. Fixtures and appliances shall be measured in number. Supply and feeder Cables, cable conduits and cable trays shall not be measured but included in DB's prices Manholes, handholds and the like shall be measured in number. All Systems and devices shall be in turn over including installation, testing and				
40.4.21	<b>Lighting points</b> Supply, Install and Connect Lighting Points including fire proof boxes fire proof Conduits, fire retardant (E90) 3*1.5 mm2 cables and 5*1.5mm2 for emergency kits, Light Switches, and all accessories as per drawings and specifications. Price to also include any necessary painting or tiling after connecting the points.	SET No.	1		
40.4.22	<b>Lighting fixtures</b> Supply, Install and Connect the following high frequency control gear Lighting Fixtures including P.F. correction capacitors, Lamps, installation for all lighting fixtures using galvanized iron chains to suspend the fixtures in the ceiling and all accessories as per drawings and specifications. Supply and install Surface mounted globe 13.5W/1100lm with metal based and opal diffuser, IP65.	SET No.	1		
40.4.23	<b>Main Electrical Connection</b> Supply, Install and Connect 5x6mm2 XLPE cable include 1Φ1.5" PVC conduit from MDB to the new Unit. Price shall also include excavation, any necessary painting, plastering or tiling after connecting the points.	L.M	15		
<b>C. Mechanical Works</b>					

	<p>Preamble. Supply networks pipes To Tanks, or from on roof feeding tanks to collectors shall be priced in Linear meter. Water tanks shall be measured in number. , Sanitary Fixtures shall be measured in number, price to include cold and hot water pipes supply and fittings to collectors, also to include drain supply , fittings connection, to manholes. Drains, Floor Traps, Clean outs and the like shall be measured in number.</p> <p>Internal sanitary sewers network shall be included in the rates of sanitary fixtures and appliances. and the sanitary fixtures includes the cost of poexgol pipes for basins, toilets, science lab basins, home economics basins, ..etc., price also includes the connection to drainage network of these fixtures in sanitary units and labs. Vents and vertical stacks shall measured in linear meter. Manhole, Galleys and the like shall be measured</p>				
40.4.24	<p>Supply and Install White Vitreous Western type handicapped Toilet (Class A and approved by Palestine Standards Institution) Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings, accessories movable handle and fixed handle as shown on drawings and in Specifications. as per specifications , drawing and as directed by supervision Engineer.</p>	Complete Set	1		
40.4.25	<p>Supply and Install White Vitreous China handicapped Wash Basin(sliding type) (Class A and approved by Palestine Standards Institution), size (40 * 56) cm. Complete with all fittings, valves, waste pipes to nearest floor trap, taps or mixer (Class A and approved by Palestine Standards Institution), connection to water distribution, traps, and any other necessary parts as Specification and as directed by Eng. Price includes supplying and installing 40x60cm mirror. Gear tap.</p>	Complete Set	1		
40.4.26	<p>Supply and install 6" UPVC pipes SN8 heavy duty, at least (4.9mm) thick, Local Made or equal and must be approved by Palestine Standard Institution, between manholes in with all required materials, sockets, fittings , rubber seals, elbow, etc. The price includes excavation ,backfilling of at least 15 cm sand above , below and around the pipes including back-filling of selected material above the sand, and disposal of surplus excavated materials. Excavation shall be to any depth, width, and in any type of soil or rock, connection for internal sewerage network to connect to existing or proposed new sewage network or the septic tank and insulation of septic tank wall after connection.</p>	L.M	15		
40.4.27	<p>Supply and install 4" galvanized vertical pipes heavy duty for rain water, Local Made or equal and must be approved by Palestine Standard Institution. Price includes digging for pipes, supports, hangers , and all rubber joints and sealants, and rainwater pipe end outlets from roof to ground.</p>	L.M	4		
40.4.28	<p>Heavy duty stainless steel 4" floor drain syphon trap with screw type screen and with closed covers for urinals , all of approved brand , complete with all required fittings and connections using reduced "T" for connecting sanitary fixtures, the traps in stairs to be with closed cover</p>	No	1		
40.4.29	<p>Supply and Install of Precast Concrete Manholes with minimum 15cm wall thickness for sewage and storm water drainage In compliance with specifications and Drawings. Price shall include excavation to any depth according to slopes, B200 reinforced concrete for base, back filling, cement plaster, benching, 8 or 25Ton Cast Iron cover as indicated , drop if needed, and all necessary works. all as shown in drawings, specifications, and approval of supervisor engineer. a. Ø60cm, 8 ton C.I cover</p>	NO.	3		
Total Ibn Kahldoun Elementary Boys School (NIS)					

BILLS OF QUANTITIES					
CONSULTANT: Universal Group for Engineering and Consulting			DATE: March 2023		
Al Haj Tawfiq Elementary Boys School					
ITEM No.	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (ILS)	AMOUNT (ILS)
41.1	Preliminary Items				
41.1.1	Supply and installation of the project marble sign (110 cm x 70cm) that include coloured project information. The Contractor shall do the design and fix the sign as per the supervision engineer instructions. The price shall include fixing the sign properly with all required drilling, jumboo bolts, rehabilitation of any damages occurred during fixation.	No.	1		
41.1.2	Demolishing works inside the WASH facilities (WCs) that intersects with the designed structure in accordance with the drawings. The price shall include demolishing but not limited to all inside partition walls, stalls, floors Tiles, Wall Tiles, electrical wires, lighting Points, Collectors, Sockets, Outlets, toilets, squatting toilets, windows, under tiles sewerage pipes/network, internal water supply network, etc. all as per drawings, and supervision engineer instructions. The price shall also includes demolish or removal of all obstacles, excavation, levelling etc. all as per drawings, and supervision engineer instructions. The price shall include remove all demolished materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
41.1.3	Remove carefully works inside the WASH facilities (WCs). The price shall include but not limited to remove carefully, main doors, WC doors, sinks, wash basins, lighting Points, Collectors, accessories, taps, etc. all as per drawings, and Engineer instructions. The Contractor shall transport all removed materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
41.1.4	Allow for every expenses to demolish, do the preparations, excavation, cut in natural stone or reinforced concrete reinstatement etc to prepare the area for the works of the handicap unit. The price shall include remove all demolished materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
41.1.5	<u>Demolishing works for the wall between the two WASH facilities.</u> Allow for every work and cost to demolish the wall between the two WASH facilities. The Contractor shall transport all removed materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
41.2	External Works				
41.2.2	<u>Awning Works</u> Supply and install steel awning at one location or several location as per the detail in the drawing and as per supervision engineer. The price shall also include all steel tubes (columns, horizontal, vertical etc.), steel corrugated sheets, drain gutters, steel bolts, excavation, backfilling, reinforced concrete foundations, reinstatement, 3 Inch galvanized Steel rain water, painting, the fixation, joints, angles and whatever necessary to complete the work in accordance with the drawings, specifications and to the approval of the supervision engineer. Price to include any required works including but not limited to, sealant works, fixing, fastening, welding etc. The Hight of the awning as per drawings or 3.5 meter if not mentioned. The final location or several locations of awning will be fixed during the shop drawing phase and as instructed by the supervision engineer, the Contractor shall not claim for additional cost or object.	m2	25		
41.2.3	Supply and install outside drinking fountain as shown on drawings, rate includes, sink 4.35X0.75m on block stands, the work should be finished and completed to the highest standard. Rate include excavation, B200 R. concrete (all steel reinforcement required), stone works, plastering, glazing tiles, local marble coping, planters and metal cover with all fittings, 8 unit high quality (Class A and approved by Palestine Standards Institution) chrome plated taps of approved kind, rates also include p.v.c. Drainpipe outlet to green area or as per drawings.	L.S	1		
41.3	Rehabilitation and extension of Existing WASH unit				
A. Civil Works					

41.3.1	Supply and Build Concrete Block Walls, 'Grade 35' of any size blocks single or cavity. The measurements will be to one side only all done according to the dwg. specifications and Engineer instructions and approval. Hollow blocks 10 cm thick for the partition walls. Price shall also include Supply and Cast Reinforced Concrete Grade 'B250 With a minimum cement content of 300 Kg. per cubic meter. Price also to include shuttering, reinforcing 4Ø10 and stirrups 1Ø8@25cm ,and all related works according to drawings and specifications and engineer instructions. For the beams 20cmX 10cm above Hollow blocks	M <sup>2</sup>	13.0		
41.3.2	Supply and paint high quality emulsion paint, for top walls and internal drop beams (sides and bottom), on one priming coat and two finishing coats, using two coats of complete putty, as per satisfaction of the supervisor engineer.	M <sup>2</sup>	25		
41.3.3	Supply and Fix Factory-made Steel Doors as per drawings, specification. Price to include frame (door) (as per details), fixing completely, ironmongery, cylinders, cylindrical locks handles (Approved by Palestine Standards Institution). 6 mm. glazing, gaskets, oil Paint in three coats in addition to two primer coats. A 40cm x 40cm sign made of Metal shall be fixed on the door. The sign should be coloured and the icon and writing to be assigned by the supervision engineer,	No.	1		
41.3.4	Supply and Install Non-Slip Coloured Ceramic Floor Tiles Thickness 0.6 cm. First choice and free from all defect grade "A". (Approved by Palestine Standards Institution). Price to include sand with cement filling (Grade B-100), pointing with white cement and cleaning on site, removal of the old tiles, levelling and all the necessary work to complete the job in accordance with the instructions of the supervision engineer.	M <sup>2</sup>	10		
41.3.5	Supply and Install White Glazed or coloured Ceramic Wall Tiles Thickness 0.6 cm, First choice European type and free from all defects Grade "A". (Approved by Palestine Standards Institution). Price to include white round aluminium edges patching around services. Two coats of epoxy pointing ..All works shall be in accordance with drawings and specifications.	M <sup>2</sup>	50		
41.3.6	Supply, fix and operate non sliding Aluminium Windows extrusion Section 7700 or equal, with protective electrostatic applied polyester powder paint of 70-80 microns. Price to include 6.38mm thick laminated glass (3+0.38+3mm) for double glass. float glazing and all other accessories and fittings to complete works as per drawings and specifications. Price shall include the steel protection from outside made of steel frame and steel wire mesh. Price shall also include painting, fixing etc.	M <sup>2</sup>	8		
41.3.7	Supply and install Local marble threshold for under Doors and under windows 3-4 cm thickness. All as per drawings, specifications and supervision engineer.	m2	4		

41.3.8	Supply and Fix Wooden Doors 4.5 cm Thick single or double sashes. With (Frame),(4.5*3.5) cm hardwood (Zan) edging and (3.5*9.5) cm soft wood stile. Edge strip banding of width 4.5 mm. Formica over veneer on both sides, colour for frames and Architrave as directed by engineer. Door paneling to be soft wood 4.5*3.5 cm. each 4 cm., frames of galvanized steel sheet frame of 2mm thick for corridor doors ( as per drawings), width according to the wall thickness' and Allowance of 4 - 6 cm. thickness for plastering and tiling purposes, immersed in wood preservative before erection then embedded completely in sand - cement mortar and completely anchored as per specification. Architrave of Hardwood (Swedish)(4*1.2)cm, price to include ironmongery, kick plates of aluminium 20cm height from one side for main bath room doors, U shaped 10cm height from both sides at the bottom for internal doors kick plates of aluminium 20cm height for bath room doors, U shaped both sides, and at the bottom door stoppers, transparent fiber glass 6mm thick for both upper vision panel & for vision panel inside door leaf, gaskets cylindrical Lock ((Approved by Palestine Standards Institution), and painting in three coats of oil paint in addition to primer coat. Price includes also aluminium louvers of 50x60cm in the bottom for store doors. All as per Detailed Drawings, specification. Size as per drawings	No.	6		
<b>B. Electrical Works</b>					
	<p>Preamble: All Supplied Materials Should be Local Made (if available), Grade A and Free From Defects, Having Supervisor Certificate From Palestinian Standard Institution (PSI).</p> <p>Price to include submittal and obtaining approval of shop drawings, detailed and as-built drawings for all works as well as coordinating the same with the other services, activities and furniture.</p> <p>Price to include, also, submittal of catalogues and manufacturer instruction. Fixtures and appliances shall be measured in number. Supply and feeder Cables, cable conduits and cable trays shall not be measured but included in DB's prices</p> <p>Manholes, handholds and the like shall be measured in number. All Systems and devices shall be in lump sum including installation, testing and commissioning.</p> <p>Rates of fixtures and appliances shall include installation, wiring, switches and conduit works.</p> <p>All systems equipment (Class A and approved by Palestine Standards Institution)</p>				
41.3.9	<p><b>Lighting points</b></p> <p>Supply, Install and Connect Lighting Points including fire proof boxes fire proof Conduits, fire retardant (E90) 3*1.5 mm2 cables and 5*1.5mm2 for emergency kits, Light Switches, and all accessories as per drawings and specifications. Price to also include any necessary painting or tiling after connecting the points.</p>	SET No.	7		
41.3.10	<p><b>Lighting fixtures</b></p> <p>Supply, Install and Connect the following high frequency control gear Lighting Fixtures including P.F. correction capacitors, Lamps, installation for all lighting fixtures using galvanized iron chains to suspend the fixtures in the ceiling and all accessories as per drawings and specifications. Supply and install globe 34W/3700lm LED recessed modular panel with aluminium frame and opal diffuser, colour temp. 4000K UGR&lt;19, IP40</p>	SET No.	7		
<b>C. Mechanical Works</b>					



	<p>Preamble. Supply networks pipes To Tanks, or from on roof feeding tanks to collectors shall be priced in Linear meter. Water tanks shall be measured in number. , Sanitary Fixtures shall be measured in number, price to include cold and hot water pipes supply and fittings to collectors, also to include drain supply , fittings connection, to manholes. Drains, Floor Traps, Clean outs and the like shall be measured in number.</p> <p>Internal sanitary sewers network shall be included in the rates of sanitary fixtures and appliances. and the sanitary fixtures includes the cost of poexgol pipes for basins, toilets, science lab basins, home economics basins, ..etc., price also includes the connection to drainage network of these fixtures in sanitary units and labs. Vents and vertical stacks shall measured in linear meter. Manhole, Galleys and the like shall be measured in number. External sewers pipes shall be measured in linear meter for each individual diameter and material. Rates of all fittings , fixtures , appliances and pipe laying shall include:- Supply of material, workmanship, installation, testing and commissioning. Rates to include also all peace's and fittings, including by passes , floats, cleaning outlets , automatic vents, vents and stack covers, valves and non return valves and the like needed to complete works as per specifications. Insulation and painting as called for in specifications. Excavation and cutting for all pipe laying works, bedding back filling and all works connected with pipe laying. All ties, sleeves, joints, tie bolts and rods, brackets and the like. Rates to include Workshops, Coordinated and as- built drawings as approved by the Engineer. , the contractor should submit best quality, approved two brands for each mechanical works items for approval, and should be approved by PSI, any cut in blocks for installations should be done using special cutting machine, (all mechanical materials as sanitary fixtures fixtures, devices should be Italy made, Germany, Spanish made or equivalent )</p>				
41.3.11	<p>Supply &amp; Install Porcelain W.C. bowl class "A" white or coloured , (Italy, Spanish made or equivalent) with heavy duty seat and cover. Price includes plastic flush tank, hanging iron steel bracket, bolts and nuts, as well as flexible flush hose , valve, porcelain paper holder, connection to pexogol pipe, connection to drainage and all related materials. Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include complete removal of the old toilets, replacement of any broken tiles, broken valves and then supplying new Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings as per specifications , drawing and as directed by supervision engineer.</p>	Complete Set	6		
41.3.12	<p>Supply &amp; Install Porcelain wall hung wash basin white or coloured engineer of size 50 x 45 cm of approved brand (Italy, Spanish made or equivalent), Price shall include chromium plated mixer with chromium plated handle mounted on wall. the price also includes connection to Pexogol pipe, liquide soap holder , and all fixation and hanging bracket. Price includes supplying and installing 40x60cm mirror., semi pedestal and all other required materials, including connection to drainage system.</p>	Complete Set	5		
41.3.13	<p>Supply and install wall/window type exhaust fans of approved manufacture (European type or equal) complete with self – act automatic shutter. Price includes galvanized ducts, grills, shutter and making necessary holes in walls or glass and fixing, and wiring cables all as per specifications, and approval of supervisor engineer. The fan shall have it is own electrical wiring inside walls or ceiling, one socket/key etc. The price shall include any excavation, painting, plastering etc. all as shown in drawings, specifications, and approval of supervisor engineer. Extract Fan, 100 CFM</p>	No.	7		
41.3.14	<p>Supply and install wall/window type exhaust fans of approved manufacture (European type or equal) complete with self – act automatic shutter. Price includes galvanized ducts, grills, shutter and making necessary holes in walls or glass and fixing, and wiring cables all as per specifications, and approval of supervisor engineer. The fan shall have it is own electrical wiring inside walls or ceiling, one socket/key etc. The price shall include any excavation, painting, plastering etc. all as shown in drawings, specifications, and approval of supervisor engineer. Extract Fan, 400 CFM IN LINE</p>	No.	2		

<b>41.3.15</b>	Supply and install floor cleanout 4" UPVC including stainless steel (sraled type) cover (15*15cm) complete with connection to drain pipes as located in drawings, specifications and approval of supervisor engineer	No.	1		
<b>41.3.16</b>	Supply and Install White Vitreous Western type handicapped Toilet (Class A and approved by Palestine Standards Institution) Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings, accessories movable handle and fixed handle as shown on drawings and in Specifications. as per specifications , drawing and as directed by supervision Engineer.	Complete Set	1		
<b>41.3.17</b>	Supply and Install White Vitreous China handicapped Wash Basin(sliding type) (Class A and approved by Palestine Standards Institution), size (40 * 56) cm. Complete with all fittings, valves, waste pipes to nearest floor trap, taps or mixer (Class A and approved by Palestine Standards Institution), connection to water distribution, traps, and any other necessary parts as Specification and as directed by Eng. Price includes supplying and installing 40x60cm mirror. Gear tap.	Complete Set	1		
<b>41.3.18</b>	Supply and install 4" UPVC pipes including vent caps with filters SN8 heavy duty, at least (4.9mm) thick, Local Made or equal and must be approved by Palestine Standard Institution, between manholes in with all required materials, sockets, fittings , rubber seals, elbow, etc. The price includes excavation ,backfilling of at least 15 cm sand above , below and around the pipes including back-filling of selected material above the sand, and disposal of surplus excavated materials. Excavation shall be to any depth, width, and in any type of soil or rock, connection for internal sewerage network to connect to existing or proposed new sewage network or the septic tank and insulation of septic tank wall after connection.	L.M	6		
<b>41.3.19</b>	ditto as but 2" UPVC pipes	L.M	3	160	
<b>Total Al Haj Tawfiq Elementary Boys School (NIS)</b>					

BILLS OF QUANTITIES					
CONSULTANT: Universal Group for Engineering and Consulting			DATE: March 2023		
Muscat Boys School					
ITEM No.	DESCRIPTION	UNIT	QUANTITY	UNIT RATE (ILS)	AMOUNT (ILS)
42.1	Preliminary Items				
42.1.1	Supply and installation of the project marble sign (110 cm x 70cm) that include coloured project information. The Contractor shall do the design and fix the sign as per the supervision engineer instructions. The price shall include fixing the sign properly with all required drilling, jumbao bolts, rehabilitation of any damages occurred during fixation.	No.	1		
42.1.2	Demolishing works inside the WASH facilities (WCs) that intersects with the designed structure in accordance with the drawings. The price shall include demolishing but not limited to all inside partition walls, stalls, floors Tiles, Wall Tiles, electrical wires, lighting Points, Collectors, Sockets, Outlets, toilets, squatting toilets, windows, under tiles sewerage pipes/network, internal water supply network, etc. all as per drawings, and supervision engineer instructions. The price shall also includes demolish or removal of all obstacles, excavation, levelling etc. all as per drawings, and supervision engineer instructions. The price shall include remove all demolished materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
42.1.3	Remove carefully works inside the WASH facilities (WCs). The price shall include but not limited to remove carefully, main doors, WC doors, sinks, wash basins, lighting Points, Collectors, accessories, taps, etc. all as per drawings, and Engineer instructions. The Contractor shall transport all removed materials to approved locations outside the schools as per the supervision engineer instructions.	L.S	1		
42.2	External Works				
42.2.1	<b>Drinking Fountain Works:</b> Rehabilitation of U shape drinking fountain as shown on pictures, rate includes, sink 7 m long. Rate includes external plastering, sand and cement mortar, 20*20cm ceramic tiles, 2 inch pvc pipe, 10-cm cement blocks, 12 unit high quality (Class A and approved by Palestine Standards Institution) chrome plated taps of approved kind, rates also include p.v.c. Drainpipe outlet to the nearest manhole. And the accessories and equipment needed to finish the work in accordance with the details and the instructions of the supervision engineer. Price shall also include all necessary excavation, backfilling, reinforced concrete, reinstatement etc.	L.S	1		
42.2.2	<b>Awning Works</b> Supply and install steel awning at one location or several location as per the detail in the drawing and as per supervision engineer. The price shall also include all steel tubes (columns, horizontal, vertical etc.), steel corrugated sheets, drain gutters, steel bolts, excavation, backfilling, reinforced concrete foundations, reinstatement, 3 Inch galvanized Steel rain water, painting, the fixation, joints, angles and whatever necessary to complete the work in accordance with the drawings, specifications and to the approval of the supervision engineer. Price to include any required works including but not limited to, sealant works, fixing, fastening, welding etc. The Hight of the awning as per drawings or 3.5 meter if not mentioned. The final location or several locations of awning will be fixed during the shop drawing phase and as instructed by the supervision engineer, the Contractor shall not claim for additional cost or object.	m2	25		
42.3	Rehabilitation of Existing WASH unit				
A. Civil Works					

42.3.1	Supply and paint three coats polycide paint for ceilings including corridor ceilings of high quality (Approved by Palestine Standards Institution) and by the supervision engineer.	M <sup>2</sup>	66		
42.3.2	Supply and paint high quality emulsion paint, for top walls and internal drop beams (sides and bottom), on one priming coat and two finishing coats, using two coats of complete putty, as per satisfaction of the supervisor engineer.	M <sup>2</sup>	60		
42.3.3	Supply and Fix Factory-made Steel Doors as per drawings, specification. Price to include frame (door) (as per details), fixing completely, ironmongery, cylinders, cylindrical locks handles (Approved by Palestine Standards Institution). 6 mm. glazing, gaskets, oil Paint in three coats in addition to two primer coats. A 40cm x 40cm sign made of Metal shall be fixed on the door. The sign should be coloured and the icon and writing to be assigned by the supervision engineer,	No.	1		
42.3.4	Supply and Install Non-Slip Coloured Ceramic Floor Tiles Thickness 0.6 cm. First choice and free from all defect grade "A". (Approved by Palestine Standards Institution). Price to include sand with cement filling (Grade B-100), pointing with white cement and cleaning on site, removal of the old tiles, levelling and all the necessary work to complete the job in accordance with the instructions of the supervision engineer.	M <sup>2</sup>	35		
42.3.5	Supply and Install White Glazed or coloured Ceramic Wall Tiles Thickness 0.6 cm, First choice European type and free from all defects Grade "A". (Approved by Palestine Standards Institution). Price to include white round aluminium edges patching around services. Two coats of epoxy pointing ..All works shall be in accordance with drawings and specifications.	M <sup>2</sup>	120		
42.3.6	Supply and install Local marble threshold for under Doors and under windows 3-4 cm thickness. All as per drawings, specifications and supervision engineer.	m2	5		
42.3.7	Supply and Fix Wooden Doors 4.5 cm Thick single or double sashes. With (Frame).(4.5*3.5) cm hardwood (Zan) edging and (3.5*9.5) cm soft wood stile. Edge strip banding of width 4.5 mm. Formica over veneer on both sides, colour for frames and Architrave as directed by engineer. Door paneling to be soft wood 4.5*3.5 cm. each 4 cm., frames of galvanized steel sheet frame of 2mm thick for corridor doors ( as per drawings), width according to the wall thickness' and Allowance of 4 - 6 cm. thickness for plastering and tiling purposes, immersed in wood preservative before erection then embedded completely in sand - cement mortar and completely anchored as per specification. Architrave of Hardwood (Swedish)(4*1.2)cm, price to include ironmongery, kick plates of aluminium 20cm height from one side for main bath room doors, U shaped 10cm height from both sides at the bottom for internal doors kick plates of aluminium 20cm height for bath room doors, U shaped both sides, and at the bottom door stoppers, transparent fiber glass 6mm thick for both upper vision panel & for vision panel inside door leaf, gaskets cylindrical Lock ((Approved by Palestine Standards Institution), and painting in three coats of oil paint in addition to primer coat. Price includes also aluminium louvers of 50x60cm in the bottom for store doors. All as per Detailed Drawings, specification. Size as per drawings	No.	6		
<b>C. Mechanical Works</b>					

	<p>Preamble. Supply networks pipes To Tanks, or from on roof feeding tanks to collectors shall be priced in Linear meter. Water tanks shall be measured in number. , Sanitary Fixtures shall be measured in number, price to include cold and hot water pipes supply and fittings to collectors, also to include drain supply , fittings connection, to manholes. Drains, Floor Traps, Clean outs and the like shall be measured in number.</p> <p>Internal sanitary sewers network shall be included in the rates of sanitary fixtures and appliances. and the sanitary fixtures includes the cost of poexgol pipes for basins, toilets, science lab basins, home economics basins, ..etc., price also includes the connection to drainage network of these fixtures in sanitary units and labs. Vents and vertical stacks shall measured in linear meter. Manhole, Galleys and the like shall be measured in number. External sewers pipes shall be measured in linear meter for each individual diameter and material. Rates of all fittings , fixtures , appliances and pipe laying shall include:- Supply of material, workmanship, installation, testing and commissioning. Rates to include also all peace's and fittings, including by passes , floats, cleaning outlets , automatic vents, vents and stack covers, valves and non return valves and the like needed to complete works as per specifications. Insulation and painting as called for in specifications. Excavation and cutting for all pipe laying works, bedding back filling and all works connected with pipe laying. All ties, sleeves, joints, tie bolts and rods, brackets and the like. Rates to include Workshops, Coordinated and as- built drawings as approved by the Engineer. , the contractor should submit best quality, approved two brands for each mechanical works items for approval, and should be approved by PSI, any cut in blocks for installations should be done using special cutting machine, (all mechanical materials as sanitary fixtures fixtures, devices should be Italy made, Germany, Spanish made or equivalent )</p>				
<b>42.3.8</b>	<p>Supply &amp; Install Porcelain W.C. bowl class "A" white or coloured , (Italy, Spanish made or equivalent) with heavy duty seat and cover. Price includes plastic flush tank, hanging iron steel bracket, bolts and nuts, as well as flexible flush hose , valve, porcelain paper holder, connection to pexogol pipe, connection to drainage and all related materials. Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include complete removal of the old toilets, replacement of any broken tiles, broken valves and then supplying new Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings as per specifications , drawing and as directed by supervision engineer.</p>	Complete Set	6		
<b>42.3.9</b>	<p>Supply &amp; Install Porcelain wall hung wash basin white or coloured engineer of size 50 x 45 cm of approved brand (Italy, Spanish made or equivalent), Price shall include chromium plated mixer with chromium plated handle mounted on wall. the price also includes connection to Pexogol pipe, liquide soap holder , and all fixation and hanging bracket. Price includes supplying and installing 40x60cm mirror., semi pedestal and all other required materials, including connection to drainage system.</p>	Complete Set	4		
<b>42.3.12</b>	<p>Supply and install 6" UPVC pipes SN8 heavy duty, at least (4.9mm) thick, Local Made or equal and must be approved by Palestine Standard Institution, between manholes in with all required materials, sockets, fittings , rubber seals, elbow, etc. The price includes excavation ,backfilling of at least 15 cm sand above , below and around the pipes including back-filling of selected material above the sand, and disposal of surplus excavated materials. Excavation shall be to any depth, width, and in any type of soil or rock, connection for internal sewerage network to connect to existing or proposed new sewage network or the septic tank and insulation of septic tank wall after connection.</p>	L.M	10		
<b>42.3.13</b>	ditto as but 4" UPVC SN 4 pipes including vent caps with filters	L.M	20		
<b>42.3.14</b>	<p>Supply and install wall/window type exhaust fans of approved manufacture (European type or equal) complete with self – act automatic shutter. Price includes galvanized ducts, grills, shutter and making necessary holes in walls or glass and fixing, and wiring cables all as per specifications, and approval of supervisor engineer. The fan shall have it is own electrical wiring inside walls or ceiling, one socket/key etc. The price shall include any excavation, painting, plastering etc. all as shown in drawings, specifications, and approval of supervisor engineer.</p> <p>Extract Fan, 100 CFM</p>	No.	4		
<b>42.4</b>	<b>Rehabilitation of WASH unit # 2</b>				
<b>A. Civil Works</b>					

42.4.1	Supply and Build Concrete Block Walls, 'Grade 35' of any size blocks single or cavity. The measurements will be to one side only all done according to the dwg. specifications and Engineer instructions and approval. Hollow blocks 10 cm thick for the partition walls. Price shall also include Supply and Cast Reinforced Concrete Grade 'B250 With a minimum cement content of 300 Kg. per cubic meter. Price also to include shuttering, reinforcing 4Ø10 and stirrups 1Ø8@25cm, and all related works according to drawings and specifications and engineer instructions. For the beams 20cmX 10cm above Hollow blocks	M <sup>2</sup>	4.0		
42.4.2	Supply and paint three coats polycide paint for ceilings including corridor ceilings of high quality (Approved by Palestine Standards Institution) and by the supervision engineer.	M <sup>2</sup>	8.0		
42.4.3	Supply and paint high quality emulsion paint, for top walls and internal drop beams (sides and bottom), on one priming coat and two finishing coats, using two coats of complete putty, as per satisfaction of the supervisor engineer.	M <sup>2</sup>	14		
42.4.4	Supply and Fix Factory-made Steel Doors as per drawings, specification. Price to include frame (door) (as per details), fixing completely, ironmongery, cylinders, cylindrical locks handles (Approved by Palestine Standards Institution). 6 mm. glazing, gaskets, oil Paint in three coats in addition to two primer coats. A 40cm x 40cm sign made of Metal shall be fixed on the door. The sign should be coloured and the icon and writing to be assigned by the supervision engineer, Dimensions: 1m *2.0m	No.	1		
42.4.5	Supply and Install Non-Slip Coloured Ceramic Floor Tiles Thickness 0.6 cm. First choice and free from all defect grade "A". (Approved by Palestine Standards Institution). Price to include sand with cement filling (Grade B-100), pointing with white cement and cleaning on site, removal of the old tiles, levelling and all the necessary work to complete the job in accordance with the instructions of the supervision engineer.	M <sup>2</sup>	8		
42.4.6	Supply and Install White Glazed or coloured Ceramic Wall Tiles Thickness 0.6 cm, First choice European type and free from all defects Grade "A". (Approved by Palestine Standards Institution). Price to include white round aluminium edges patching around services. Two coats of epoxy pointing ..All works shall be in accordance with drawings and specifications.	M <sup>2</sup>	60		
42.4.7	Supply and Fix Wooden Doors 4.5 cm Thick single or double sashes. With (Frame),(4.5*3.5) cm hardwood (Zan) edging and (3.5*9.5) cm soft wood stile. Edge strip banding of width 4.5 mm. Formica over veneer on both sides, colour for frames and Architrave as directed by engineer. Door paneling to be soft wood 4.5*3.5 cm. each 4 cm., frames of galvanized steel sheet frame of 2mm thick for corridor doors ( as per drawings), width according to the wall thickness' and Allowance of 4 - 6 cm. thickness for plastering and tiling purposes, immersed in wood preservative before erection then embedded completely in sand - cement mortar and completely anchored as per specification. Architrave of Hardwood (Swedish)(4*1.2)cm, price to include ironmongery, kick plates of aluminium 20cm height from one side for main bath room doors, U shaped 10cm height from both sides at the bottom for internal doors kick plates of aluminium 20cm height for bath room doors, U shaped both sides, and at the bottom door stoppers, transparent fiber glass 6mm thick for both upper vision panel & for vision panel inside door leaf, gaskets cylindrical Lock ((Approved by Palestine Standards Institution), and painting in three coats of oil paint in addition to primer coat. Price includes also aluminium louvers of 50x60cm in the bottom for store doors. All as per Detailed Drawings, specification. Size as per drawings	No.	2		

<b>42.4.8</b>	Supply and Fix Wooden Doors 4.5 cm Thick single or double sashes. With Hardwood (Zan) Frame size (4.5*3.5) cm, and (3.5*9.5) cm soft wood stile. Edge strip banding of width 4.5 mm. Plywood veneer 5mm Thick on both sides. Door paneling to be soft wood 4.5*3.5 cm. each 4 cm. Frame of galvanized steel sheet frame of 2mm thick, width according to the wall thickness' and Allowance of 4 - 6 cm. thickness for plastering and tiling purposes, immersed in wood preservative before erection then embedded completely in sand - cement mortar and completely anchored as per specification. Price to include all the works including ironmongery, cylinders, locks, handles and paint.	No.	1		
<b>C. Mechanical Works</b>					
	Preamble. Supply networks pipes To Tanks, or from on roof feeding tanks to collectors shall be priced in Linear meter. Water tanks shall be measured in number. , Sanitary Fixtures shall be measured in number, price to include cold and hot water pipes supply and fittings to collectors, also to include drain supply , fittings connection, to manholes. Drains, Floor Traps, Clean outs and the like shall be measured in number. Internal sanitary sewers network shall be included in the rates of sanitary fixtures and appliances. and the sanitary fixtures includes the cost of poexgol pipes for basins, toilets, science lab basins, home economics basins, ..etc., price also includes the connection to drainage network of these fixtures in sanitary units and labs. Vents and vertical stacks shall measured in linear meter. Manhole, Galleys and the like shall be measured in number. External sewers pipes shall be measured in linear meter for each individual diameter and material. Rates of all fittings , fixtures , appliances and pipe laying shall include:- Supply of material, workmanship, installation, testing and commissioning. Rates to include also all peace's and fittings, including by passes , floats, cleaning outlets , automatic vents, vents and stack covers, valves and non return valves and the like needed to complete works as per specifications. Insulation and painting as called for in specifications. Excavation and cutting for all pipe laying works, bedding back filling and all works connected with pipe laying. All ties, sleeves, joints, tie bolts and rods, brackets and the like. Rates to include Workshops, Coordinated and as- built drawings as approved by the Engineer. , the contractor should submit best quality, approved two brands for each mechanical works items for approval, and should be approved by PSI, any cut in blocks for installations should be done using special cutting machine, (all mechanical materials as sanitary fixtures fixtures, devices should be Italy made, Germany, Spanish made or equivalent )				
<b>42.4.9</b>	Supply & Install Porcelain W.C. bowl class "A" white or coloured , (Italy, Spanish made or equivalent) with heavy duty seat and cover. Price includes plastic flush tank, hanging iron steel bracket, bolts and nuts, as well as flexible flush hose , valve, porcelain paper holder, connection to pexogol pipe, connection to drainage and all related materials. Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include complete removal of the old toilets, replacement of any broken tiles, broken valves and then supplying new Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings as per specifications , drawing and as directed by supervision engineer.	Complete Set	2		
<b>42.4.10</b>	Supply & Install Porcelain wall hung wash basin white or coloured engineer of size 50 x 45 cm of approved brand (Italy, Spanish made or equivalent), Price shall include chromium plated mixer with chromium plated handle mounted on wall. the price also includes connection to Pexogol pipe, porcelain soap holder , and all fixation and hanging bracket. Price includes supplying and installing 40x60cm mirror., semi pedestal and all other required materials, including connection to drainage system.	Complete Set	1		

<b>42.4.11</b>	Supply and Install White Vitreous Western type handicapped Toilet (Class A and approved by Palestine Standards Institution) Complete with, Fittings, chrome plated 13mm stop and valve side tap. Price to include Flush tank 6 liter, waste pipes to nearest manhole, water tap, China plated paper holder, seat hard cover, water hose with flasher and all other fittings, accessories movable handle and fixed handle as shown on drawings and in Specifications. as per specifications , drawing and as directed by supervision Engineer.	Complete Set	1		
<b>42.4.12</b>	Supply and Install White Vitreous China handicapped Wash Basin(sliding type) (Class A and approved by Palestine Standards Institution), size (40 * 56) cm. Complete with all fittings, valves, waste pipes to nearest floor trap, taps or mixer (Class A and approved by Palestine Standards Institution), connection to water distribution, traps, and any other necessary parts as Specification and as directed by Eng. Price includes supplying and installing 40x60cm mirror. Gear tap.	Complete Set	1		
<b>42.4.13</b>	Supply and install floor cleanout 4" UPVC including stainless steel (sraled type) cover (15*15cm) complete with connection to drain pipes as located in drawings, specifications and approval of supervisor engineer	No.	1		
<b>Total Muscat Boys School (NIS)</b>					