Life-Saving Basic Primary Health Services, in Nuristan province, Afghanistan:

"Negotiation procedures for Construction of 4 waiting area in Wama, Noogram, Mandol and Doaba districts, Nuristan, Afghanistan"

PURPOSE OF THIS "TENDERING DOCUMENT"

This tendering document concerns a project IMC is implementing in collaboration with the MoPH regarding the construction of four waiting area in the Wama, Noogram, Mandol and Doaba districts of Nuristan province. The details provided as below:

DESCRIPTION OF THE ACTIVITIES

This is a succinct description of the activities to do. The technical specification required will be described below. The designs are in Appendix.

LOCATION AND ACCESSIBILITY

The waiting area sites are located in Wama, Noogram, Mandol and Doaba districts of Nuristan province. IMC team in collaboration with the Health Facility and PPHD will mark the exact locations of each waiting area site. IMC will hand over the site to successful contractor to initiate the agreed civil works through a joint IMC and HF and PPHD visit.

PRE-AMBLE TO THE SPECIFICATION

This Specification covers the minimum standards of workmanship and materials required by the contract. All works shall be carried out to the approval of the Engineer. Any items, which do not meet the requirements of this Specification shall be repaired or demolished and re-instated at the Contractor's expense. The contractor shall be liable for any delays to the project caused as a result of construction or demolishing defective work.

Any items of work not described in this Specification but forming part of the works shall meet the minimum standards of workmanship and materials, which can normally be expected locally. Where there is conflict between local standards of and this Specification, this Specification shall take precedence.

This document forms part of the Contract, and should be read in conjunction with the other Contract Documents:

- Contract Agreement
- Conditions of Contract
- Bid Form
- Contract Drawings
- Other documents referred to any of the contract documents

MINIMUM STANDARDS FOR WORKMANSHIP AND MATERIALS

Quality of Materials

The qualities of all construction materials will be in accordance with the State Standard. The Engineer shall check the quality of all materials delivered to site. Any materials, which do not meet the minimum standards, shall be rejected. Such materials shall be removed from site and replaced at the Contractors expense with materials of the required quality.

Quantity of Materials
The Engineer shall check that the required quantity of materials has been delivered to site and used in the works. The Engineer will not certify payment for any materials, which have been specified in the contract but have not been used in the works, for whatever reason.

Quality of Workmanship
The Engineer shall be responsible for checking that the quality of workmanship by the contractor is of an acceptable standard according to this Specification. The Engineer will reject any works, which have not been executed to the required standard. The Contractor shall redo any rejected works at his own expense and with no time delays to the overall scheme.

MATERIALS SPECIFICATIONS

Sand
Sand shall be clean and free from contaminants such as oil, silt, soil, wood, metal or vegetable

Matter. Very fine or smooth sand shall not be used. Coarse Sand (used for concrete) shall

Have a maximum size of 5mm. Medium Sand (used for mortar) shall have a maximum size of 2mm. Fine Sand (used for plaster) shall have a maximum size of 1mm

Aggregate
Aggregate used for concrete shall be angular crushed rock varying in size from 5mm to 20mm for Grade 1 Concrete. It shall be clean and free from contaminants such as oil, silt, and soil, wood, metal or vegetable matter. **If this type of aggregate is not available, the CONTRACTOR/SUPPLIER must agree with a representative of IMC which other type to use.**

Cement
Cement (Portland 400 or 500) shall be delivered in its prime powder form and in sealed bags to the site. It shall be kept clean and dry until usage. Partially used bags of cement shall be stored in a dry place until required. Any partially used bags, which have become damp, shall be rejected.

Water
Water used for mixing concrete, mortar, plaster and other construction materials shall be potable, clean and free from organic material. If none is available on site, the contractor shall transport suitable water to site.

TECHNICAL SPECIFICATIONS

Excavations
Excavations shall be clean and free of water. The Engineer shall inspect all excavations before work proceeds. The Contractor shall give the Engineer 5 days' notice of the inspection date.

Excavations are dangerous and liable to collapse, particularly in wet weather or waterlogged ground. The Contractor shall take all necessary precautions to ensure that all excavations are properly protected to prevent accidental or unauthorized entry. Excavations deep must be according to drawing and design, deep shall not be entered unless they are shored up with wooden or other temporary bracing. The Contractor shall be responsible for safety, and be liable for any accidents, which may occur.

Concrete
Except otherwise specified, all plain and reinforced concrete works and concrete in general (either hand or machine mix at site) will meet the applicable standards & specifications.

Concrete design mix:
The materials used in concrete shall be proportionate by weight following the standard cement/sand/aggregate mix ratios as follows:

- For reinforced concrete mix - 1:1:2 mix ratio

- For plain/mass concrete mix - 1:1.5:3 mix ratio

The aggregates mix, cement and water content ratio shall be selected to obtain the best results for compressive strength, density, water tightness & durability, workability, and finish quality. The concrete mix must be such that the design is compatible with minimum water content ratio to give adequate workability for each grade of concrete.

The grades of concrete for the various works shall be as noted on the drawings and as below:

C25: all reinforced concrete (foundations, slabs etc.)

- Characteristics compressive strength at 28days: 250kg/cm
- Minimum cement content: 280 kg/m
- Max free water content ratio: 0.40
- Max nominal size of aggregates: 25mm

After placement, the concrete shall be vibrated by mechanical means. The method of vibration is to be approved by the Site Engineer/works personnel prior to the operation. The vibrated and consolidated concrete is to be finished to toweling or floating the surface to a smooth and flat finish.

Following placement, vibration and finishing work to the concrete and after initial set has occurred so as not to damage the surface of the concrete, appropriate measure, approved by the site Engineer/Works personnel are to be implemented to cure the concrete for a minimum period of 14 days.

Where concrete previously placed as part of the works is to be butted, jointed or raised with the addition of further concrete, except in the case where the initial concrete is blinding concrete, the first concrete surface must be suitably prepared by the scrabbling i.e. removing the laitance (fine concrete surfacing) before placement of the additional concrete. The method is to be approved by the Site Engineer/Works personnel. After scrabbling, the concrete shall be thoroughly wetted and thin layer of 1:2 cement: sand mortar applied just before pouring the new concrete.

Steel reinforcement shall be positioned with a clearance or 40mm to the face of the concrete unless otherwise directed by the site Engineer/Works personnel or shown in the Contract drawings.

Formwork for the concrete shall be to the approval of the IMC Site Engineer and shall not allow grout loss from the concrete mix.

Prior to the placement of the concrete, the formwork is to be inspected and all deleterious materials removed to the approval of the Site Engineer/Works personnel.

No mixing or placement of concrete is to be undertaken by the Contractor without the prior permission.

Reinforcement

Steel reinforcement shall be the correct diameter as shown on the drawings. The bars shall be clean and free from rust. They shall be securely fixed with wire before placing the concrete. The minimum cover to reinforcement shall be 25mm.

Frame Work:

The exact dimensions and positions shall be as per the issued execution drawing. All formworks shall be designed and built to maintain rigidity throughout the placing, ramming, vibration and setting of the concrete to the required shape, position and level, and specified class of finish. All joints shall be sufficiently tight to prevent leakage of concrete.

Before concreting is commenced, the formwork shall be thoroughly cleaned and freed from all sawdust, tie wire, shavings, earth, dirt and any other debris. Release agents should be applied and should be compatible with the class of finish; care must be taken not to contaminate the reinforcement.

Striking of formwork shall be done without damage to the concrete, including removal without shock to prevent impact load on the partially hardened concrete. For columns, walls, and other parts not supporting the weight of the concrete may be removed as soon as the concrete has hardened sufficiently

to resist possible damage due to removal operations. For suspended slabs or supporting formworks, at least 14 days of hardening are required before striking of forms.

Placing Concrete

Once mixed, concrete shall be used immediately. Any concrete, which had been allowed to achieve its initial set, shall not be placed. Concrete shall be placed in layers with a maximum thickness of 250mm. Each layer shall be thoroughly compacted with a wooden (or any other) rammer. When placing on old or set concrete, the surface of the old concrete shall be thoroughly cleaned and wetted with water. If the surface is smooth it must be chipped to form a good key. Old concrete shall be painted with liquid cement prior to placing new concrete.

Curing Concrete

Sufficient water is required for concrete to harden through hydration. The concrete must be kept moist or "cured" to ensure that it does not dry out. Poorly cured concrete will shrink or crack, and not achieve its full strength. Concrete shall be cured by covering in plastic sheets.

Spraying with water, covering with wet sand or other methods proposed by the contractor and approved by the Engineer. The contractor shall ensure that all concrete is properly cured. Curing shall start as soon as the concrete has been poured and shall continue until curing is complete after 28 days.

Concrete Finishing

Concrete shall be finished to a smooth uniform surface and finished using a metal or wooden float. The surface texture shall be flat and smooth with no irregularities or air bubbles. When formwork is removed, the face of the concrete shall be flat and smooth. If there are signs of voids, air bubbles or inadequate compaction, the concrete shall be removed, disposed of and re-laid with a fresh mix.

Wall Stone Masonry

Stone must be granite, and Stone shall be of uniform size and shape, and of the specified dimensions. The contractor may substitute alternative sized stone with the prior approval of the Engineer, and at no additional expense.

Walls shall be straight, perpendicular and dimensionally correct, constructed as shown on the drawings (if they are included). The lines of mortar shall be horizontal with no excess mortar staining the faces of the walls. The faces of walls shall be regular and even, with no irregular stones.

Mortar

Mortar for stone masonry shall be mixed in the proportion 1 cement: 4

Medium sand by volume. Sufficient water shall be added to achieve the desired workability.

The surfaces of the stones are must be smooth and has medium size, the Mortar shall be placed on all horizontal and vertical faces between the stone, with no gaps. Each stone shall be placed to the correct line and level, and shall be level in all directions. Any gaps shall be filled with additional mortar rammed in with a small wooden rammer. The outside faces of stone walls shall be pointed. No excess mortar shall be allowed to stain the faces of the stone.

Plaster and Pointing

Plaster and pointing for internal walls and external rendering shall be mixed in the proportion 1 cement: 5 for plaster and 1cement:3 for Pointing fine sand by volume. Sufficient water shall be added to achieve the desired workability.

The walls shall be wetted before applying the plaster and pointing. The plaster shall be 10mm to 20mm thick and pointing according to stone construction state, and shall have a uniform flat finish free of irregularities and blemishes. At corners and between walls and ceilings, the finish shall be clean and precise in a straight line. Untidy or poorly finished plaster shall be rejected.

When the plaster is still damp, the wall shall be floated to a smooth finish with a wet steel float.

Doors and Widows

All timber for carpenter's and joiner's works shall be approved timber properly seasoned, straight out, free from sap, twists, shakes, large loose or dead knot. Frames shall be properly jointed at corners and mortised,

tenanted and wedged in the best manner, The Contractor shall provide all nails, brads, screws, glass paper and tools etc. for the proper execution of this job and should be free of any signs of rusting. The heads of all nails, brads etc. shall be punched below the surface, The Contractor shall properly execute, all fitting ends, miters, housings, returned ends, junctions of circular with straight etc. as may be necessary. All skirting, architraves and other joinery shall be accurately scribed to any irregular surface to which they about, Wood must be Russian best quality, dry and free from knot the size for doors (7*9) cm frame and step (11.5*4.5) cm for step and for windows (7*9) cm frame and step (9*4.5) cm as per drawing design,

Nails

Nails shall be of an appropriate size for their application.

Glazing

Glazing of doors and windows shall be done with plain 4mm thick glass unless specified otherwise by the Engineer. Panes fitted into the single compartment shall be whole and will be secured with either putty or glazing beads.

Painting

For external side shall be used plastic water sheet paint 75% and for internal side shall be used plastic color 75% tow times and for stone masonry shall be used oil paint tow times and for wooden work also use oil paint with as per site engineer coordination.

Drainage System

Used and surface rain runoff water: All water from the Facility must be collected and channeled through drainage channel into soak away pits. The water drained from the high risk shall be channeled to the high risk soap away pit while water drained from the low risk shall be channeled to the low risk soak away pit.

All water from the Facility including water from hand washing basins and surface rain water must be collected and channeled through man-holes into a soak away pit as per site need

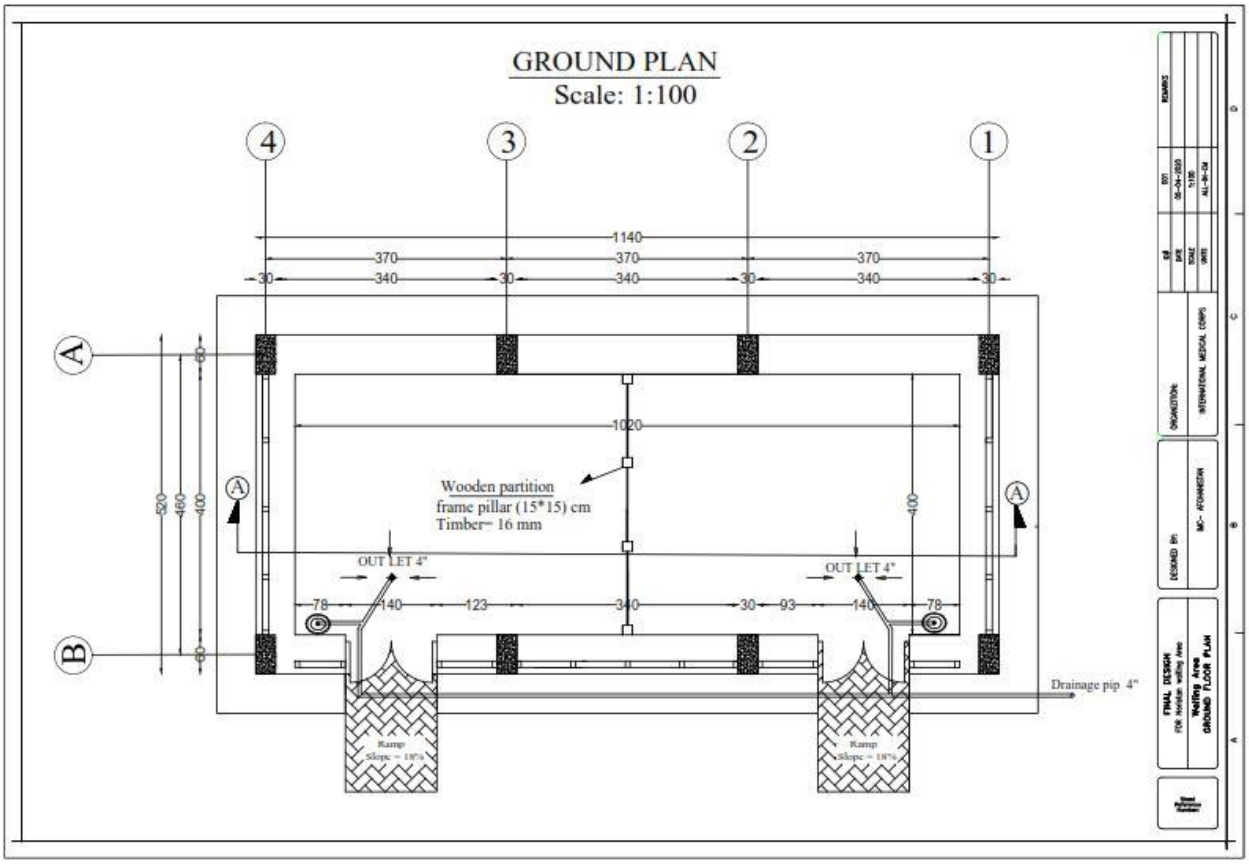
Annex 1

Plan of waiting Area

No	Description	Month 1				Month 2				Month 3				Month 4			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
1	Site preparation																
2	excavation																
3	PCC																
4	RCC																
5	Stone Masonry																
6	Pointing																
7	Plaster																
8	Filling																
9	Wooden work																
10	Izogam																
11	Painting																
12	Plumbing work																
13	Electrical work																

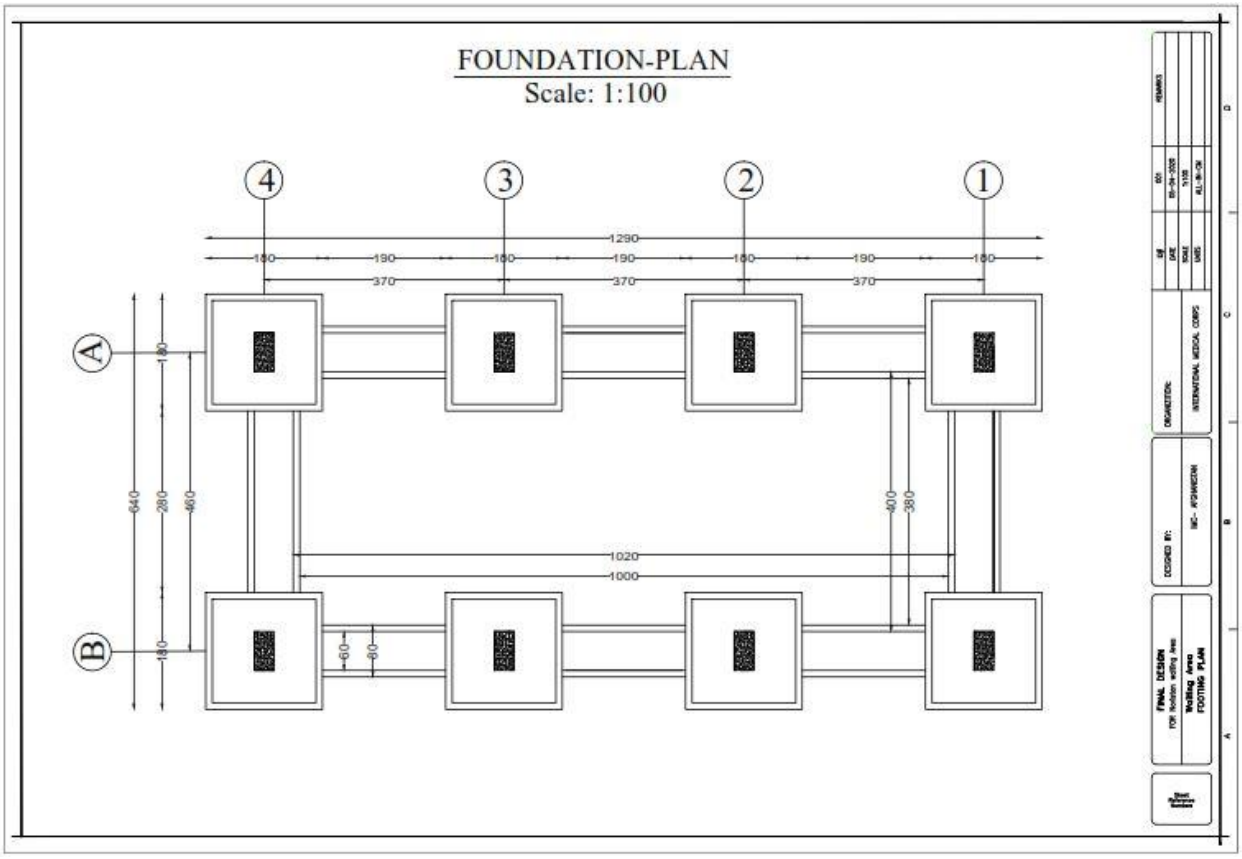
Annex 2

Plan of waiting Area



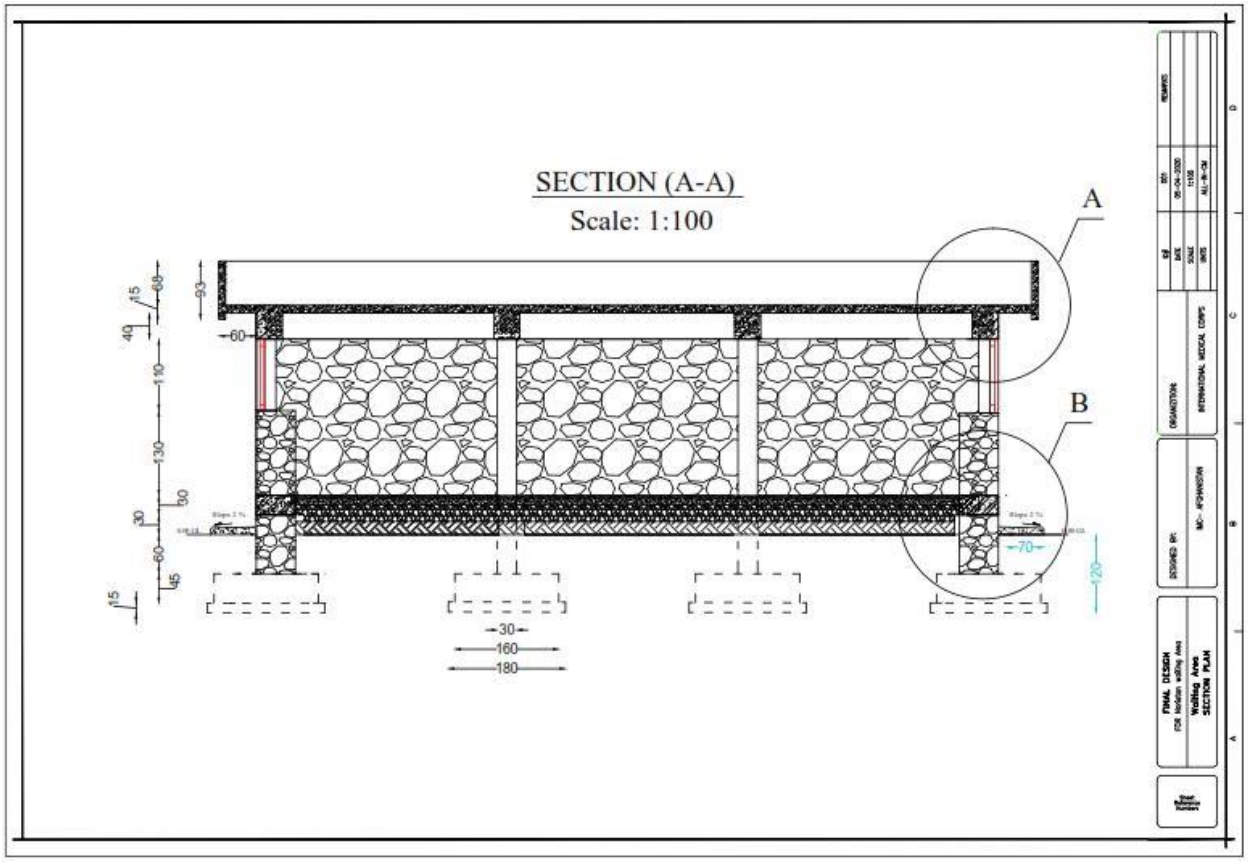
Annex 3

Plan of footing for waiting area



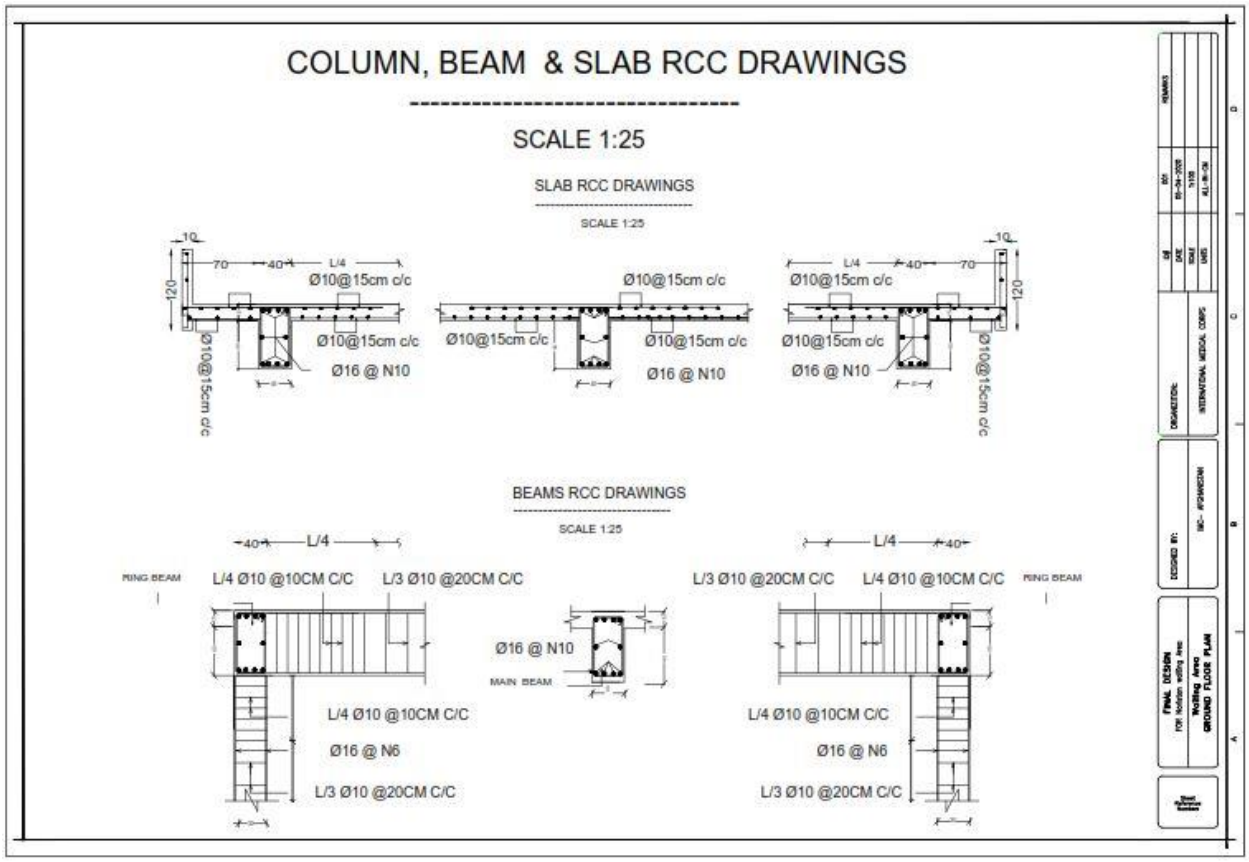
Annex 4

Section of Waiting Area



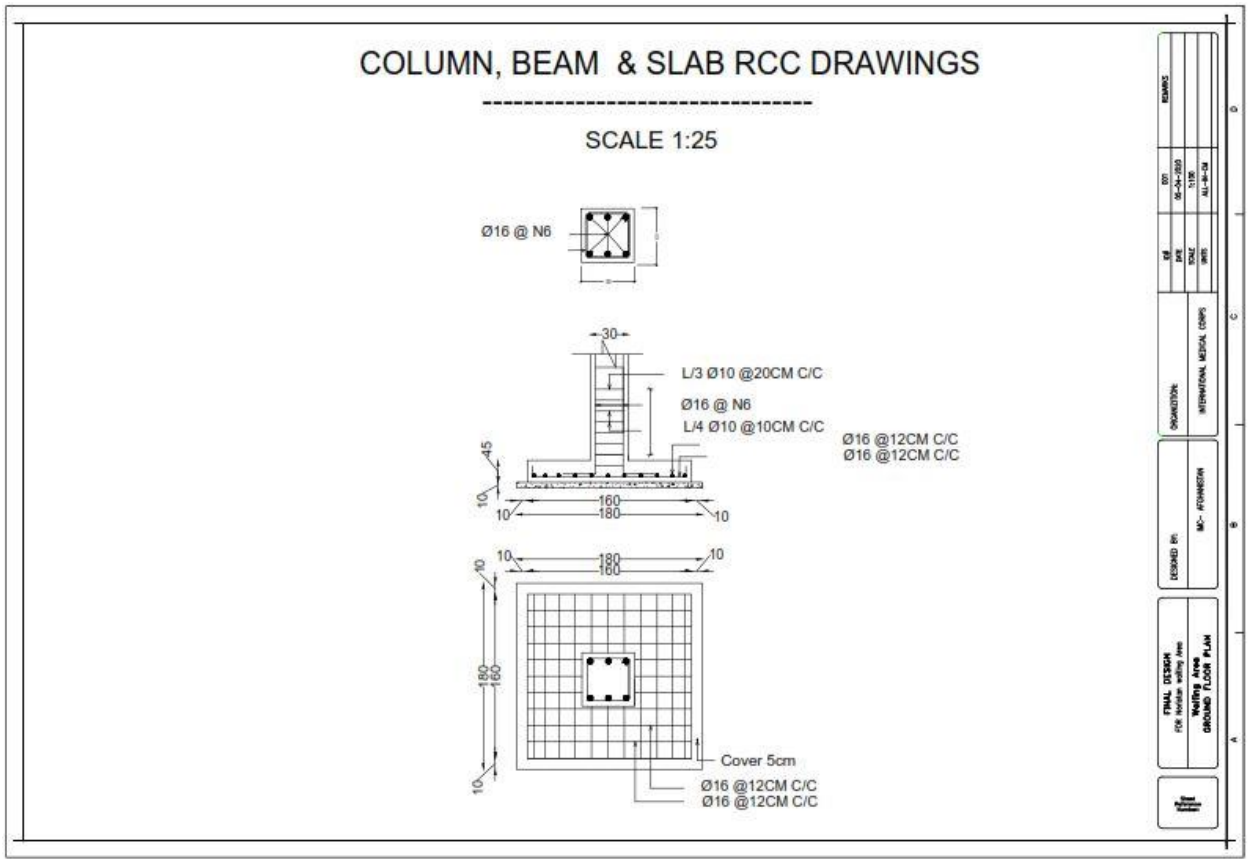
Annex 5

Reinforcement Plan



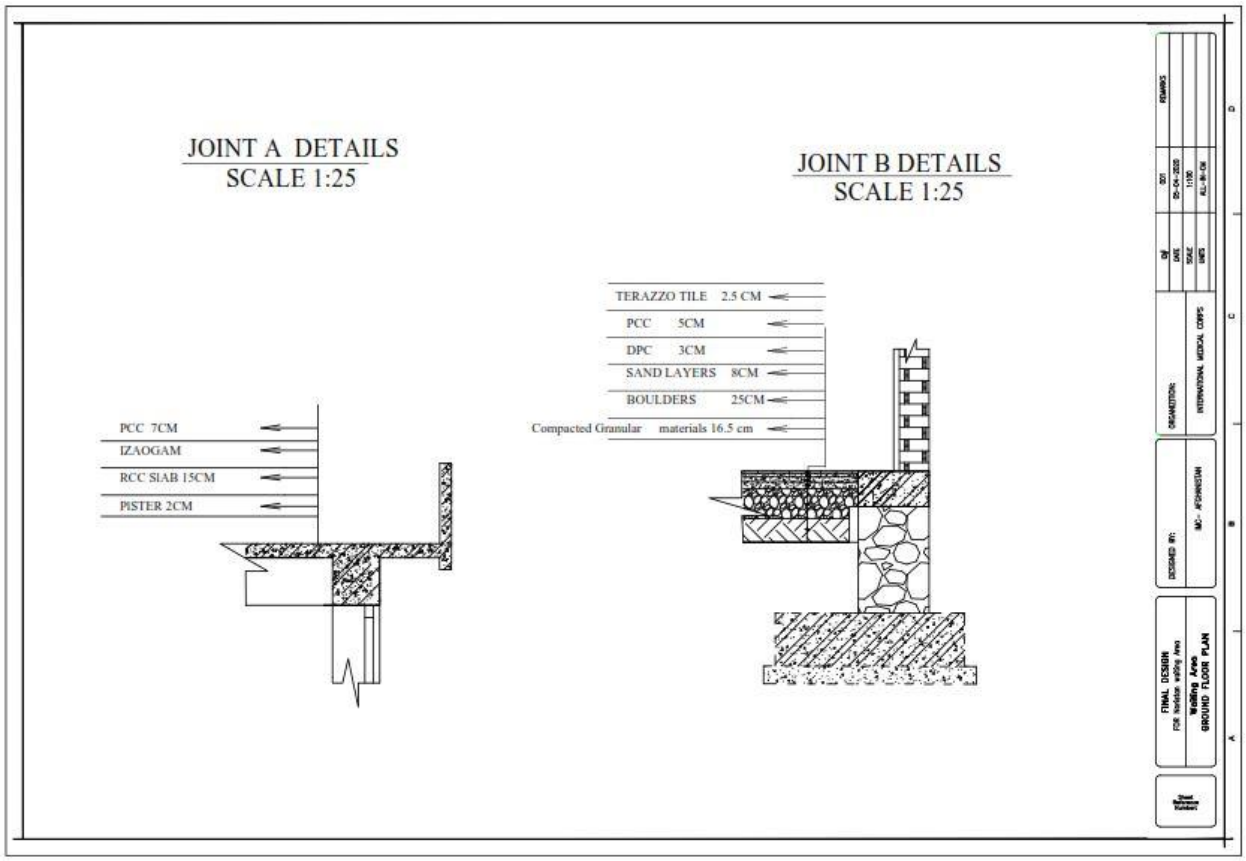
Annex 6

Reinforcement Plan



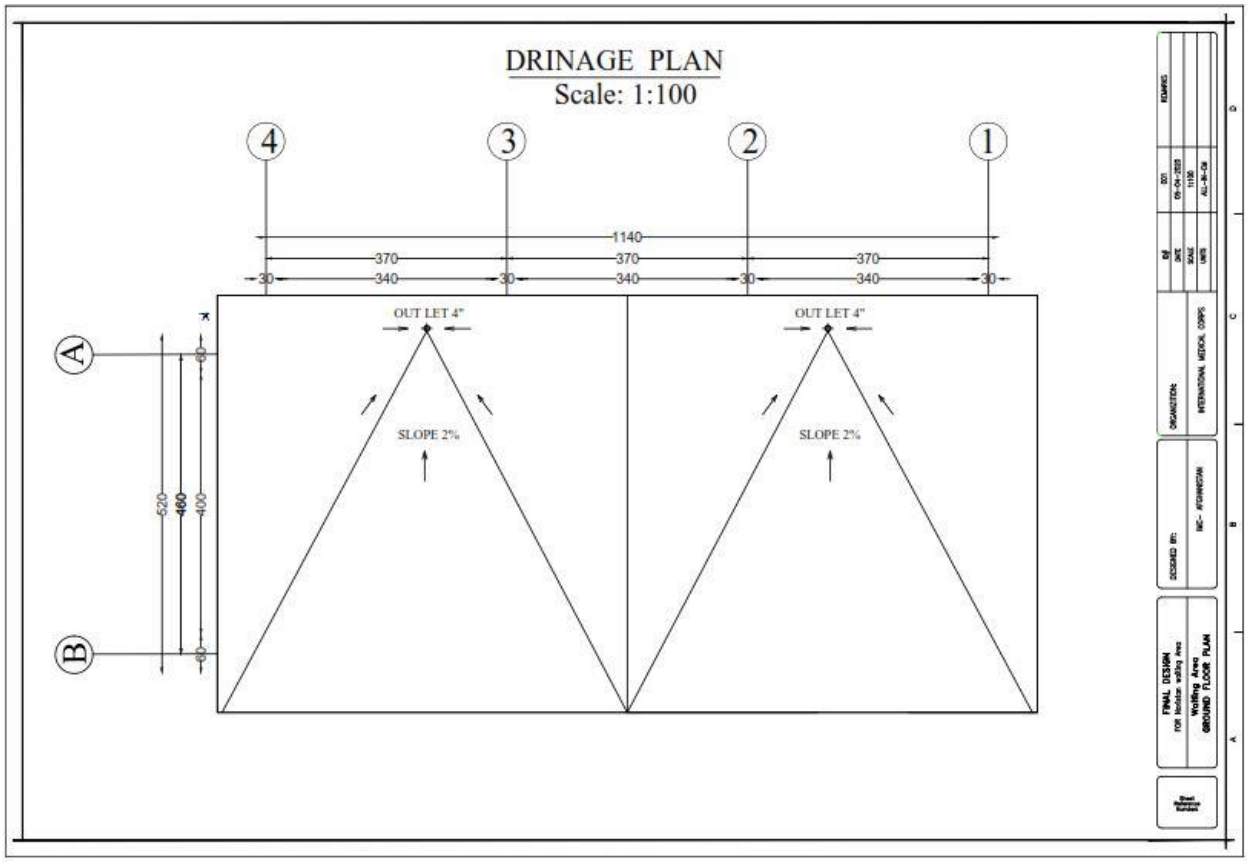
Annex 7

Details



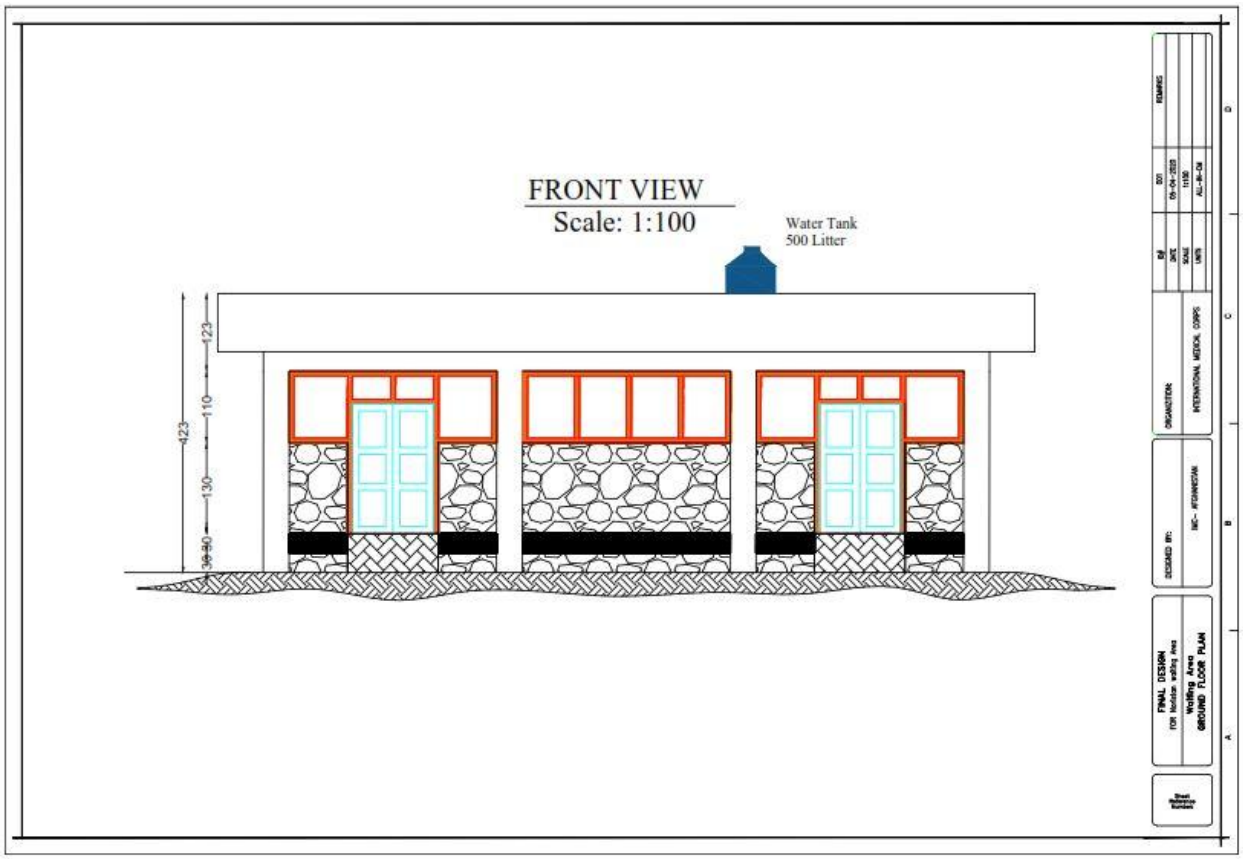
Annex 8

Drainage plan



Annex 9

Drainage plan



Annex 10

Bill of Quantity for waiting Area

Province: Nuristan project ID:		Waiting Area Bill of Quantities Districts of Wama, Noogram, Mandol and Doaba Noristan province.						
Title	No.	Item	Quantity	Unit	Unit Cost	Total Cost for one waiting area	Number of waiting area	Total Cost for 4 waiting area
A1	1.00	SITE PREPARATION	88	M2			4	
A2	2.00	SEMI HARD EXCAVATION LOADING AND UNLOADING	40	M3			4	
A3	3.00	PCC IN FOOTINGS, FLOOR DPC, PATH WAY AND ROOF: MARK 200 (1:1.5:3)	18	M3			4	
A4	4.00	R.C.C of FOOTINGS, RING, RING BEAM, PILLOR, BEAMS, SLAB AND PROFIT WALL: MARK 250 (1:1:2)	39	M3			4	
A5	5.00	STONE MASONARY, MORTOR MARK: (1:4)	48	M3			4	
A6	6.00	POINTING, MORTOR MARK: (1:3)	102	M3			4	
A7	7.00	PLASTER, MORTOR MARK: (1:5)	175.00	M2			4	
A8	8.00	FILLING, INCLODING FOOTING, FLOOR AND RAMP FROM SOIL AND BOLDER	34.00	M3			4	
A9	9.00	WOODEN WORK, DOORS AND WINDOWS	16.20	M2			4	
A10	10.00	EZOGAM FOR ROOF COMPANY KABUL STAR	110.00	M2			4	
A11	11.00	PANTING						
	11.01	Weather sheet for outside 75%	6.00	Gallon			4	
	11.02	plastic destamber color for inside 75%	7.00	Gallon			4	
	11.03	Oil Paint for stone masonary best quality	10.00	Gallon			4	
	11.04	lining for doors and windows best quality	3.00	Gallon			4	
	11.05	plastic emulsion wash rooms beast quality	2.00	Gallon			4	
A12	12.00	PLUMPING WORK						
	12.01	Gutter full size	2.00	Pcs			4	
	12.02	4" P-Trap	2.00	Pcs			4	

	12.03	4" PVC PIPE as per site with all fittings	20.00	M			4	
	12.04	Plastic tank 500 liter	2.00	Pcs			4	
	12.05	PPRC pipe with related fitings with all fittings	6.00	roles			4	
	12.06	Pashm shesha	2.00	roles			4	
	12.07	wire for pashm sheha fitting	60.00	M			4	
A13	13.00	ELECTRICAL WORK						
	13.01	Switch Boards	4.00	Pcs			4	
	13.02	Holders	9.00	Pcs			4	
	13.03	Fans	3.00	Pcs			4	
	13.04	Sockets	6.00	Pcs			4	
	13.05	Lights	6.00	Pcs			4	
	13.06	Electrical wire and Cable as per site	1.00	M			4	
GRAND TOTAL								