

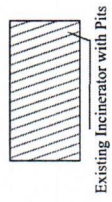
# Renovation of Pachandoor BHC, Waras District, Bamyan Province

## LIST OF ACTIVITIES IN SCOPE

| Activities |                                                            |
|------------|------------------------------------------------------------|
| 1          | Construction of RCC Water Reservoir from a Spring          |
| 2          | Water Supply system                                        |
| 3          | Repairing of Water supply and waste water system of clinic |

DATE: JULY, 2026





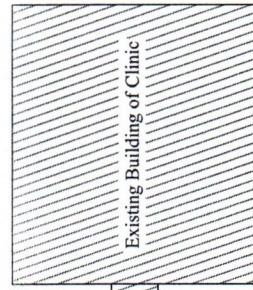
Existing Incinerator with Pits

Spring  
Spring Collection Box

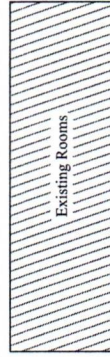


Note:  
The clinic doesn't have a boundary  
wall

Proposed Soak pit



Existing Building of Clinic



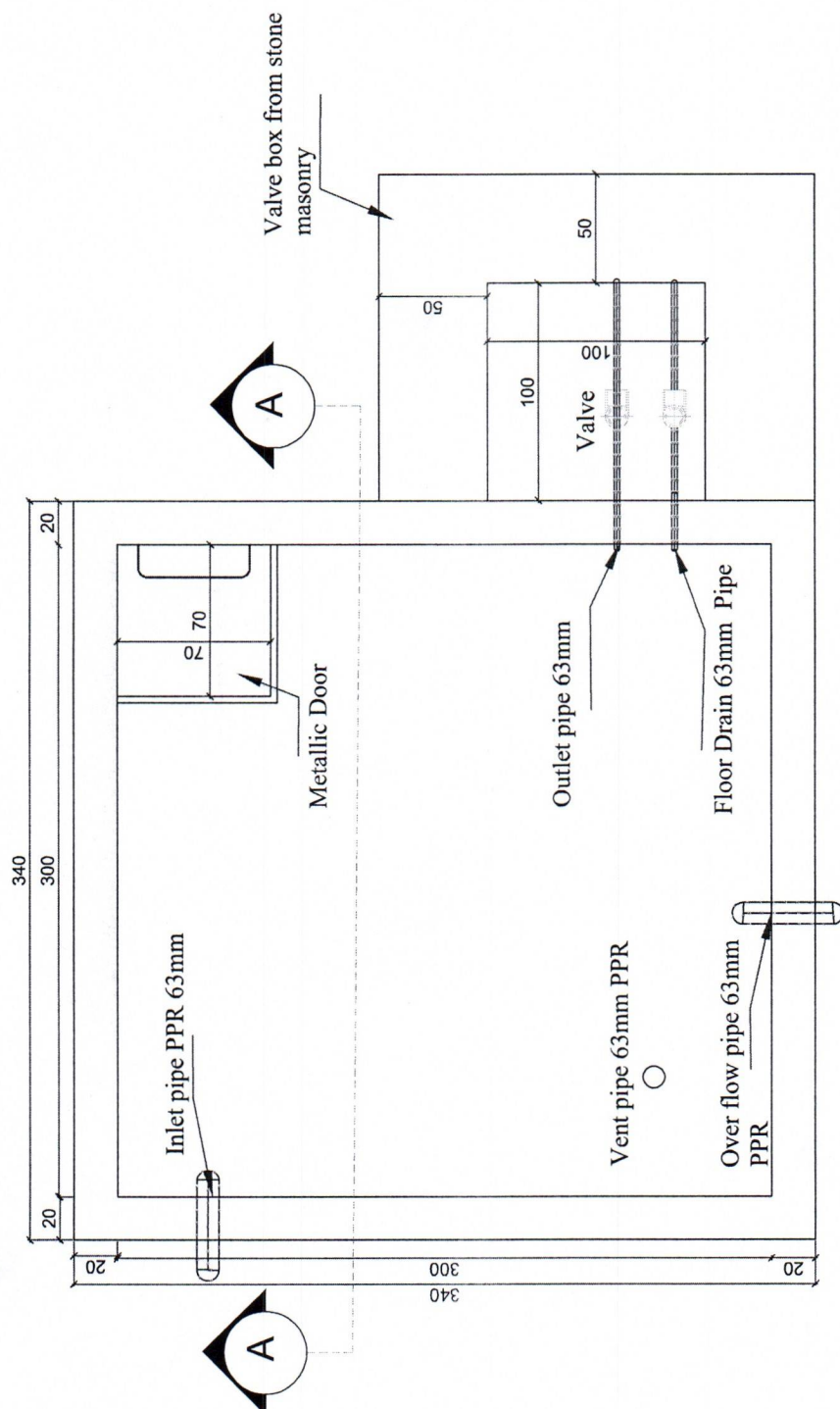
Existing Rooms

## Site Plan of Pachandoor BHC



01 | Site Plan of Clinic

|                                                  |             |                                  |             |         |                              |                            |   |                                 |                                  |                                                                  |                                                |
|--------------------------------------------------|-------------|----------------------------------|-------------|---------|------------------------------|----------------------------|---|---------------------------------|----------------------------------|------------------------------------------------------------------|------------------------------------------------|
| AGA KHAN HEALTH SERVICES, AFGHANISTAN<br>AKHS, A | SURVEYED BY | ENG. M. JAN "SULTANI"<br>AKHS, A | CHECKED BY  | AKHS, A | SCALE<br>DATE<br>DRAWING NO. | SHEET<br>NO.<br>22-07-2026 | 1 | PROVINCE<br>DISTRICT<br>VILLAGE | BAMYAN<br>Wara<br>Pachandoor BHC | PROJECT NAME<br>(IF CO-FINANCING)<br>DRAWING TITLE<br>Water tank | Ministry of Public<br>Health (BAMYAN PROVINCE) |
|                                                  | DESIGNED BY |                                  | REVIEWED BY | AKHS, A |                              |                            |   |                                 |                                  |                                                                  |                                                |
|                                                  | DRAWN BY    |                                  | APPROVED BY | AKHS, A |                              |                            |   |                                 |                                  |                                                                  |                                                |



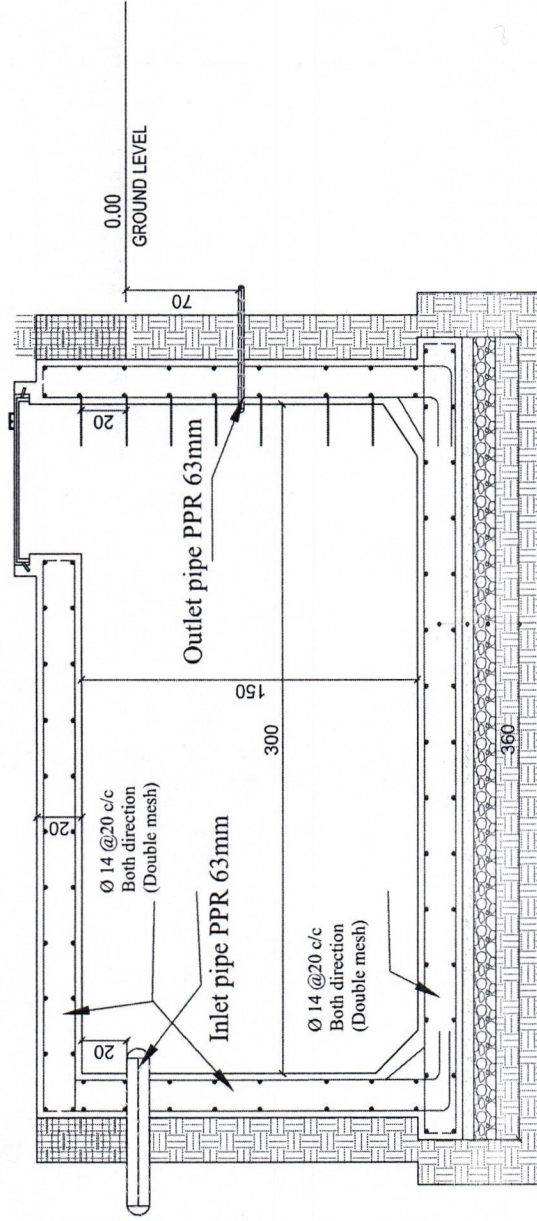
Plan of Water tank

01 | Plan of Water Reservoir

|                                                  |             |                           |             |         |                              |                         |   |          |           |                  |              |                                             |
|--------------------------------------------------|-------------|---------------------------|-------------|---------|------------------------------|-------------------------|---|----------|-----------|------------------|--------------|---------------------------------------------|
| AGA KHAN HEALTH SERVICES, AFGHANISTAN<br>AKHS, A | SURVEYED BY | ENGINEER, M. JAN "SULTAN" | CHECKED BY  | AKHS, A | SCALE<br>DATE<br>DRAWING NO. | SHEET NO.<br>22-07-2026 | 1 | PROVINCE | BAMYAN    | PROJECT NAME     | BAMYAN       | Ministry of Public Health (BAMYAN PROVINCE) |
|                                                  | DESIGNED BY | ENGINEER, M. JAN "SULTAN" | REVIEWED BY | AKHS, A |                              |                         |   | DISTRICT | Wazir     | HER CO-FINANCING |              |                                             |
|                                                  | DRAWN BY    | ENGINEER, M. JAN "SULTAN" | APPROVED BY | AKHS, A |                              |                         |   | VILLAGE  | Pachandor | DRAWING TITLE    | Water supply |                                             |



*[Handwritten signature]*



Section (A-A) water tank

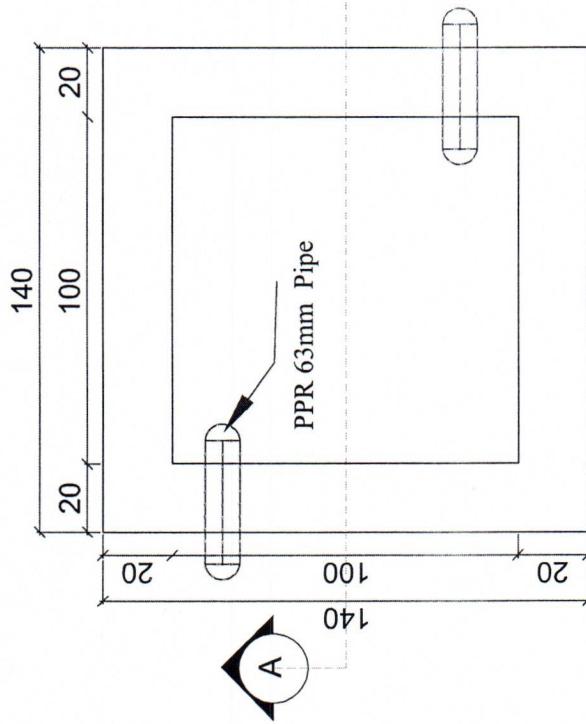
- RCC Shear wall
- 5 cm PCC (M15)
- 10 cm Compacted Gravel
- Compacted foundation 95 %



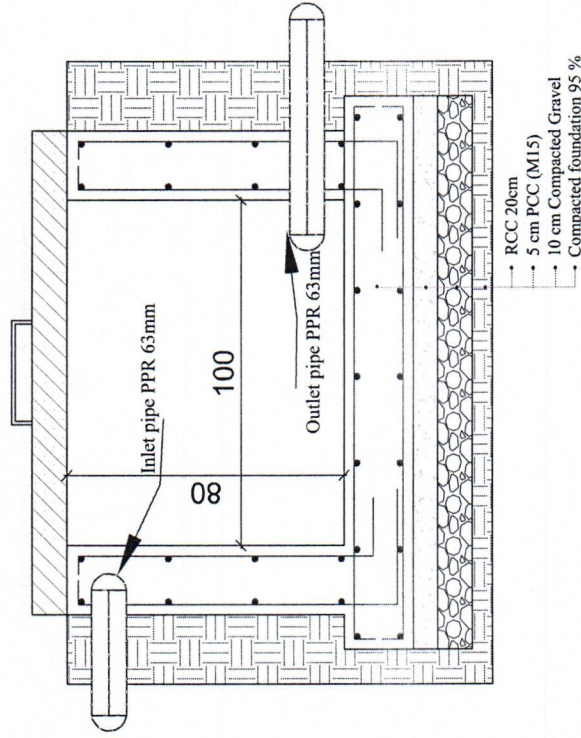
01 | SECTION(A-A) OF Water Reservoir

|                                                  |             |                       |             |         |             |            |   |          |           |                  |                                             |
|--------------------------------------------------|-------------|-----------------------|-------------|---------|-------------|------------|---|----------|-----------|------------------|---------------------------------------------|
| AGA KHAN HEALTH SERVICES, AFGHANISTAN<br>AKHS, A | SURVEYED BY | AKHS, A               | CHECKED BY  | AKHS, A | SCALE       | SHEET NO.  | 1 | PROVINCE | BAMYAN    | PROJECT NAME     | Ministry of Public Health (BAMYAN PROVINCE) |
|                                                  | DESIGNED BY | ENG. M. JAN "SULTANI" | REVIEWED BY | AKHS, A | DATE        | 22-07-2026 |   | DISTRICT | Weras     | KEY CO-FINANCING |                                             |
|                                                  | DRAWN BY    | ENG. M. JAN "SULTANI" | APPROVED BY | AKHS, A | DRAWING NO. |            |   | VILLAGE  | Pachandor | DRAWING TITLE    | Water supply system                         |

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Plan of Spring Collection Box



Section (A-A) of Spring Collection Box



01 | Plan and Section (A-A) of Collection Box



|                                                  |             |                      |             |         |             |            |   |          |                |              |                                             |
|--------------------------------------------------|-------------|----------------------|-------------|---------|-------------|------------|---|----------|----------------|--------------|---------------------------------------------|
| AGA KHAN HEALTH SERVICES, AFGHANISTAN<br>AKHS, A | SURVEYED BY | ENGINEER             | SCALE       | DATE    | DRAWING NO. | SHEET NO.  | 1 | PROVINCE | BAMYAN         | PROJECT NAME | Ministry of Public Health (BAMYAN PROVINCE) |
|                                                  | DESIGNED BY | ENG. M. JAN "SULTAN" | REVIEWED BY | AKHS, A | AKHS, A     | 22-07-2026 | 1 | DISTRICT | Weras          | Water tank   |                                             |
|                                                  | DRAWN BY    | ENG. M. JAN "SULTAN" | APPROVED BY | AKHS, A | AKHS, A     |            |   | VILLAGE  | Pachandoor BHC |              |                                             |



Aga Khan Health Services, Afghanistan  
Bamiyan PHT  
Bamiyan Provincial Engineering Department  
Renovation of Pachandoor BHC

## SCOPE OF WORK AND TECHNICAL SPECIFICATIONS



Date: 23/07/2026

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## **Scope of Work / Technical Specification**

### **1.Scope of work**

The purpose of this project is to develop a gravity-fed water supply system by conveying water from an existing natural spring to the clinic, ensuring a reliable and sustainable source of potable water.

The scope of work includes the following activities:

#### **1. Spring Development**

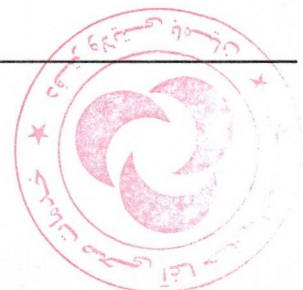
- Excavate the spring source in hard soil conditions until the spring is fully exposed and cleaned.
- Remove all silt, debris, loose materials, and unsuitable soil from the spring to improve water flow and quality.
- Shape and stabilize the spring area as required to protect the water source.

#### **2. Construction of Water Collection Box**

- Construct a reinforced concrete water collection box at the spring source.
- Apply waterproof cement plaster to the internal surfaces of the collection box to prevent leakage and protect the structure.
- Install the necessary inlet arrangements to collect spring water and direct it into the collection box.
- Ensure the structure is watertight and protected against surface water infiltration and contamination.

#### **3. Construction of Water Reservoir**

- Construct the water reservoir.
- Apply waterproof cement plaster to all internal surfaces of the reservoir to ensure water tightness and durability.
- Connect the water collection box to the reservoir through the specified pipeline.



#### **4. Valve Box Construction**

- Construct a valve box complete with the required valves and fittings for flow control, isolation, operation, and maintenance of the water supply system.

#### **5. Pipeline Installation**

- Excavate pipeline trenches in hard soil along the approved alignment from the spring to the clinic.
- Supply, lay, join, and test PE (Polyethylene) pipes, including all required fittings, couplings, bends, reducers, and accessories.
- Connect the pipeline from the reservoir to the clinic.
- Backfill and compact the trenches after successful installation and testing of the pipeline.

#### **6. Testing and Commissioning**

- Test the entire water conveyance system for leakage, structural integrity, and proper water flow.
- Flush and clean the pipeline before commissioning.
- Complete all necessary adjustments to ensure a continuous and reliable water supply to the clinic.

All excavation work under this project shall be carried out in hard soil conditions. The contractor shall provide all labor, materials, equipment, tools, transportation, supervision, and all incidental work necessary to complete the project in accordance with the approved drawings, technical specifications, and applicable engineering standards.

#### **2. Stone masonry work**

##### **Technical Specifications:**

Stone masonry shall be constructed in cement-sand mortar (1:4 ratio) using hard, dense stones. Foundation depth and width shall be as per design.

##### **Materials:**

- Hard, durable stones



- Cement (OPC)
- Clean sand
- Water (potable)

#### **Method of construction**

- Excavation shall be carried out to required depth and level.
- Base shall be compacted and leveled.
- Stones shall be laid with full mortar bedding.
- Voids shall be filled with smaller stones and mortar.
- Proper bonding and interlocking shall be ensured.

#### **Quality control**

- Check alignment, level
- Ensure proper compaction and no voids.
- Curing shall be maintained for at least 14days.

### **3. Plain cement concrete (PCC)**

#### **Technical Specifications**

PCC shall be of Grade M15 (1:2:4 mix) using as standard size aggregate.

#### **Materials**

- Cement (OPC)
- Sand and fine aggregate
- Crushed stone (coarse aggregate)
- Clean water

#### **Method of construction**

- Subgrade shall be compacted and leveled.
- Concrete shall be machine or hand mixer.
- Placing shall be done immediately after mixing not more than 30min.
- Surface shall be leveled and finished.




### **Quality control**

- Slump and workability shall be checked.
- Ensure proper compaction.
- Curing shall be done for minimum 14 days.

## **4. Reinforced cement concrete (RCC)**

### **Technical specifications**

RCC shall be Grade M20 with reinforcement steel Fy60. Concrete cover and reinforcement details shall follow structural drawings.

### **Materials**

- Cement, sand, and coarse aggregates
- Reinforcement steel bars
- Binding wire and spacers (stirrups)

### **Method of construction**

- Formwork should be properly aligned and supported.
- Reinforcement shall be cut, bent, and fixed as per design.
- Concrete shall be poured and compacted using vibrators.
- Surface shall be leveled and finished.

### **Quality control**

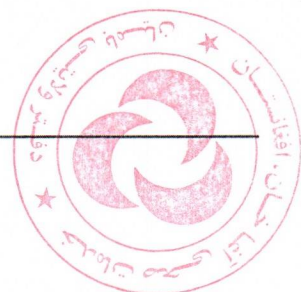
- Check reinforcement spacing, size, and cover according to the drawing.
- Ensure proper vibration and no honeycombing.
- Curing shall be done for minimum 14 days.
- Cube tests may be conducted if required.

## **5. Plumbing Work (PPR and PVC Pipes)**

### **Technical specifications**

Plumbing works shall include installation of water supply and drainage systems using approved materials, ensuring proper flow and leak-proof connections.

### **Materials**



- PPR pipes (PN20) and PE D100 for water supply
- uPVC pipes or PVC (Schedule 40 or equivalent) for drainage
- Pipe fittings, valves, and fixtures

#### **Method of construction**

- Pipes shall be laid according to approved layout.
- PPR joints shall be made using heat fusion method.
- PVC joints shall be connected using solvent cement.
- Proper slope (1–2%) shall be maintained for drainage lines.

#### **Quality control**

- Conduct pressure testing for water supply lines.
- Check all joints for leakage.
- Ensure proper alignment and support of pipes.

### **6. Completion and handover**

#### **Technical specifications**

All work shall be completed as per specifications, drawing and ready for use.

#### **Method**

- Final inspection shall be conducted.
- All systems shall be tested.
- Site shall be cleaned.

#### **Quality control**

- Ensure all defects are corrected.
- Obtain approval from supervising engineer before handover.

### **7. Safety of labor**

#### **Technical specifications**

All workers shall comply with standard construction safety regulations to ensure worker protection.

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### **Materials / Equipment**

- Personal Protective Equipment (PPE): helmets, gloves, safety boots, masks
- Safety signage and barriers

### **Method of implementation**

- Workers should be trained in safety procedures.
- Use of PPE shall be mandatory on site.
- Proper scaffolding and safe access shall be provided.

### **Quality control**

- Regular safety inspections shall be conducted.
- Any unsafe conditions shall be corrected immediately.
- Accident records shall be maintained.

## **8. Environmental**

### **Technical specifications**

Construction activities should minimize environmental impact and comply with local environmental regulations.

### **Materials / Measures**

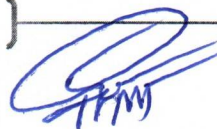
- Dust control (water spraying)
- Waste collection and disposal materials
- Noise control measures

### **Method of Implementation**

- Construction waste shall be properly managed and disposed of.
- Dust generation shall be minimized by regular water sprinkling.
- Noise should be controlled during working hours.

### **Quality control**

- Site cleanliness shall be maintained.
- No dumping of waste in unauthorized areas.



- Regular monitoring of environmental practices.

## 9. Finishing work

### Technical specifications

All finishing work shall provide a smooth, durable, and aesthetically acceptable surface.

- Surfaces shall be prepared and cleaned.
- Plastering shall be applied evenly where required.
- Final finishing shall be smooth and level.
- Check surface smoothness and alignment.
- Ensure no cracks, unevenness, or defects.
- Final inspection before handover.

**Duration:** The contractor shall complete all renovation work within the agreed contract period, with a final completion deadline of 30/09/2026.

Regards

Aga Khan health services, Afghanistan  
Bamyan Provincial Engineering Department



  
M. Jam Sultani  
Civil Engineer