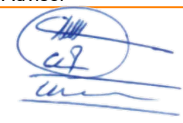


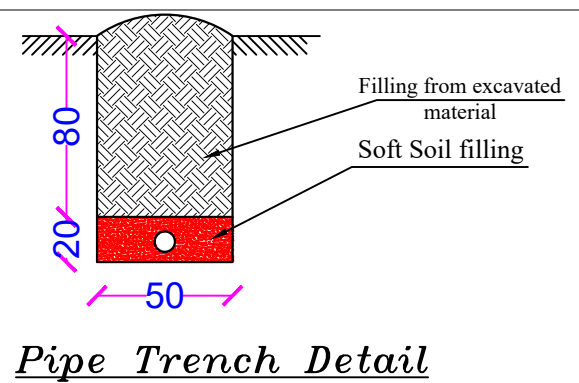
## WORLD VISION AFGHANISTAN

Flood Response Project

World Vision®

Province Ghor	District Dawlat-Yar	Village: Kushk-All-yar	Project ID Number: A222823		
Prepared by: WASH Engineer		Review by: WASH Advisor		File Name: Drawing.dwg	
				<b>A3</b>	Sheet Reference Number: <b>W-01</b>
				Plot Date: 31, August, 2024	Plot Scale: NTS

Site Plan





Koshk Allahyar Water Supply System

**Introduction:** Koshk Allahyar is a community located in Dawlat-Yaar district, Ghor province, consisting of 100 households. Recently, the community experienced significant destruction due to a flash flood, which severely impacted the existing water supply system, rendering it completely dysfunctional. As a result, residents are currently forced to use river water, which poses health risks.

The water supply system, established in 2021, utilizes a spring as its water source and is powered by solar energy. The spring is located at a lower elevation, necessitating the use of a pump to transfer water to a reservoir, from which it is distributed to 11 water points throughout the community via gravity. The system's components and their current conditions are detailed below:

Components and Current Conditions

1. Pipe Network

- Description:** The network includes pipes that distribute water to 11 public stand taps within the community.
- Current Condition:** The pipe network remains unaffected by the flood due to its depth (over one meter), which protected it from damage.

2. Spring Catchment Area

- Description:** The spring, located beside the river on its right bank, serves as the water source.
- Current Condition:** The catchment area was affected by the flood due to the lack of protective structures. To mitigate future risks, a retaining wall with stone masonry is required along the riverbank.

3. Public Stand Taps

- Description:** There are 11 public stand taps distributed across the community, providing access to potable water.
- Current Condition:**
  - 8 taps are fully damaged and need reconstruction.
  - 3 taps have minor defects and require repairs.
  - The current number of water points is adequate to meet the community's needs according to Sphere standards.

4. Reservoir

- Description:** A 15 cubic meter capacity reservoir stores the water.
- Current Condition:** The reservoir is well-positioned and fully functional, unaffected by the flood.

5. Flow Control Valve

- Description:** Flow control valves are essential for managing water distribution.
- Current Condition:** The system lacks flow control valves. It is necessary to install at least two flow control valves with valve box structures at strategic points in the network to enhance operational control.

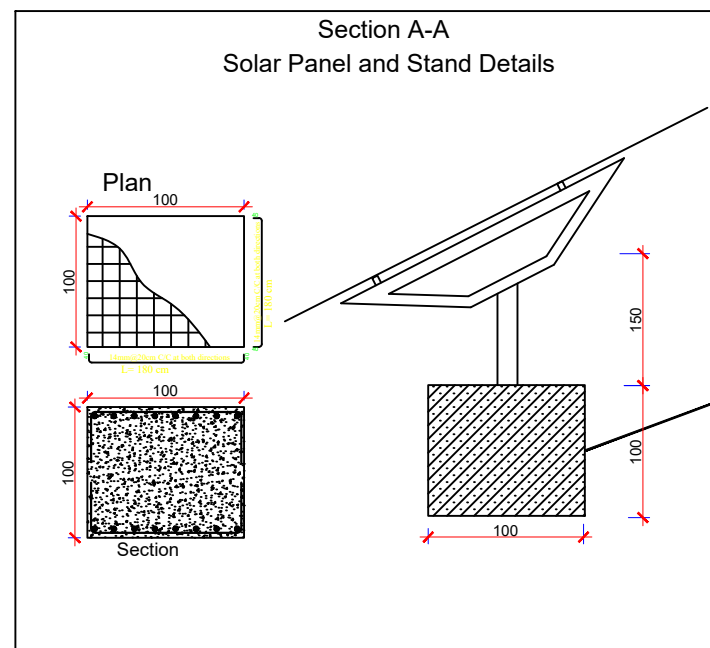
6. Solar System

- Solar Panels:**
  - Description:** The system includes 15 solar panels, each with a 270-watt capacity.
- Current Condition:**
  - 12 panels are on rotational stands, while 3 are on a locally made stand.
  - An additional 3 panels and a new solar stand are needed to improve solar tracking and efficiency.
- Water Pump:**
  - Description:** The pump is crucial for transferring water from the spring to the reservoir.
- Current Condition:** The pump is fully damaged and requires replacement with a new submersible pump (PEDROLLO 4SR6/17 3HP 2.2Kw 380V). Additionally, the motor cable (200 meters, 4\*6mm²) needs replacement and protection with a 50mm PE pipe.
- Solar Inverter:**
  - Description:** The inverter converts solar energy for use in the system.
- Current Condition:** The 5.5 kW inverter is fully functional and does not need replacement.

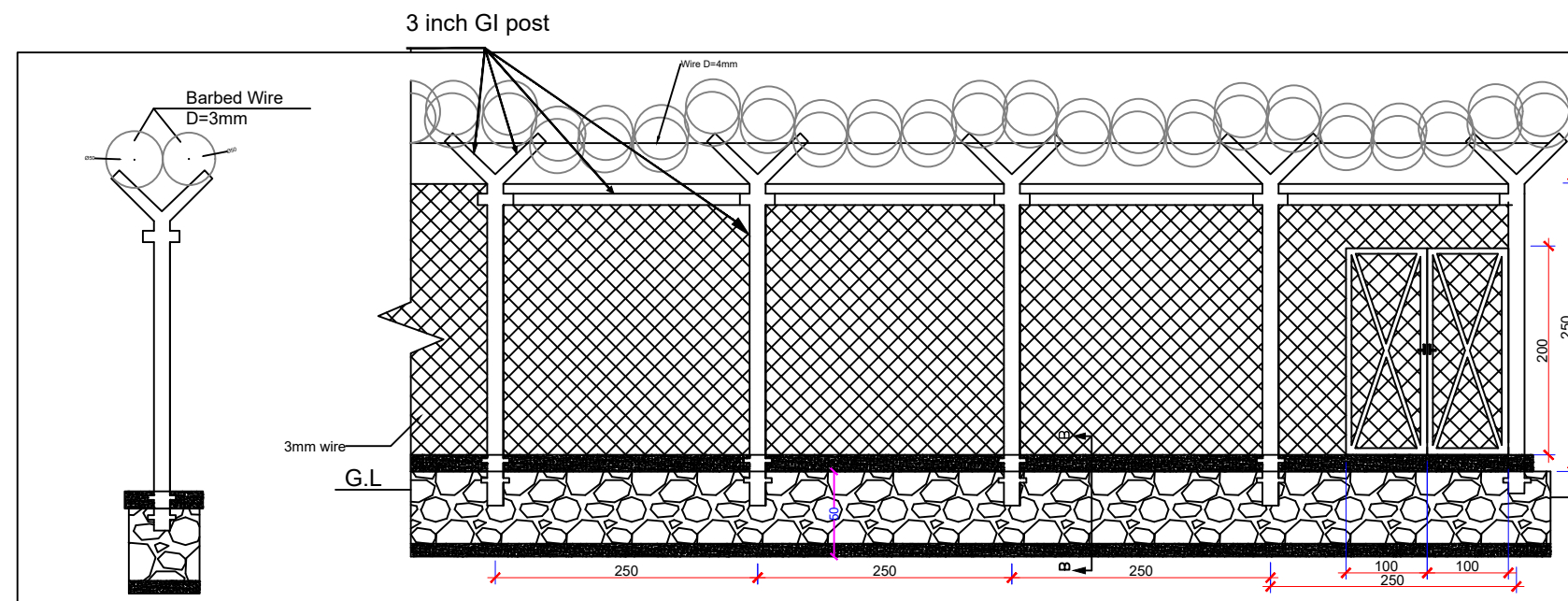
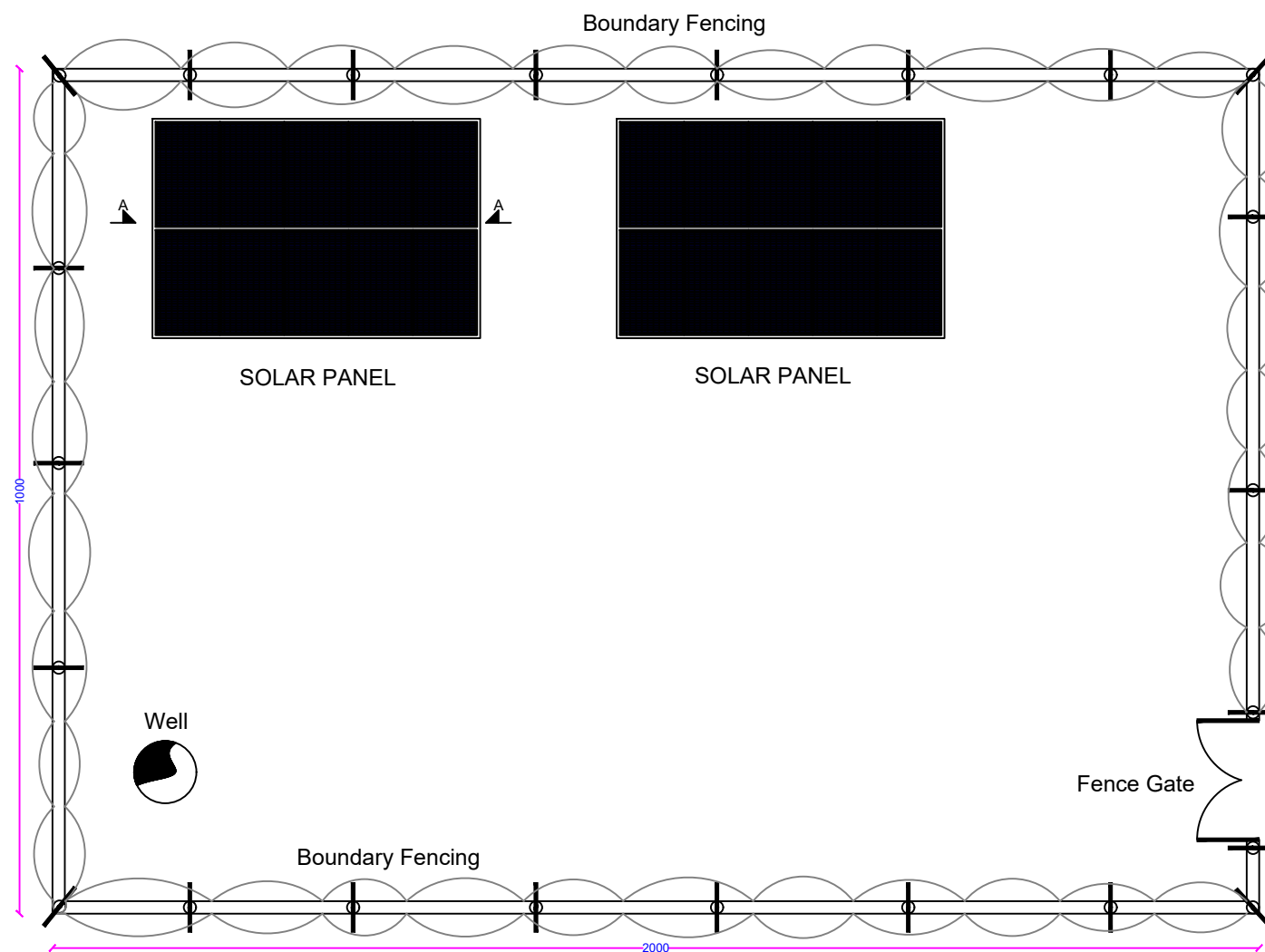
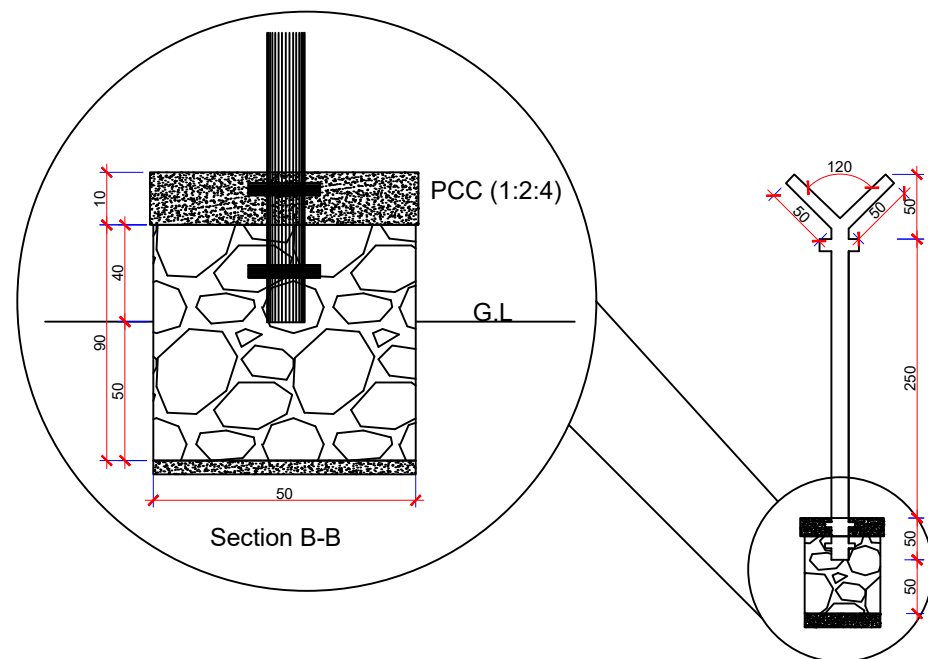
7. Fence Wall

- Description:** A fence wall protects the solar panels.
- Current Condition:** The existing fence is inadequate, restricting the rotation of solar panels for optimal sun tracking. A new fence wall with a stone masonry foundation (20x10 meters) is required to enhance protection and allow for better solar panel rotation.

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Project Description and Rehab-Plan				Plot Date: 31, August, 2024	Plot Scale: NTS



RCC Mark 200 (1:1.5:3)  
dia 14mm @ 20 cm c/c for  
both directions double layer



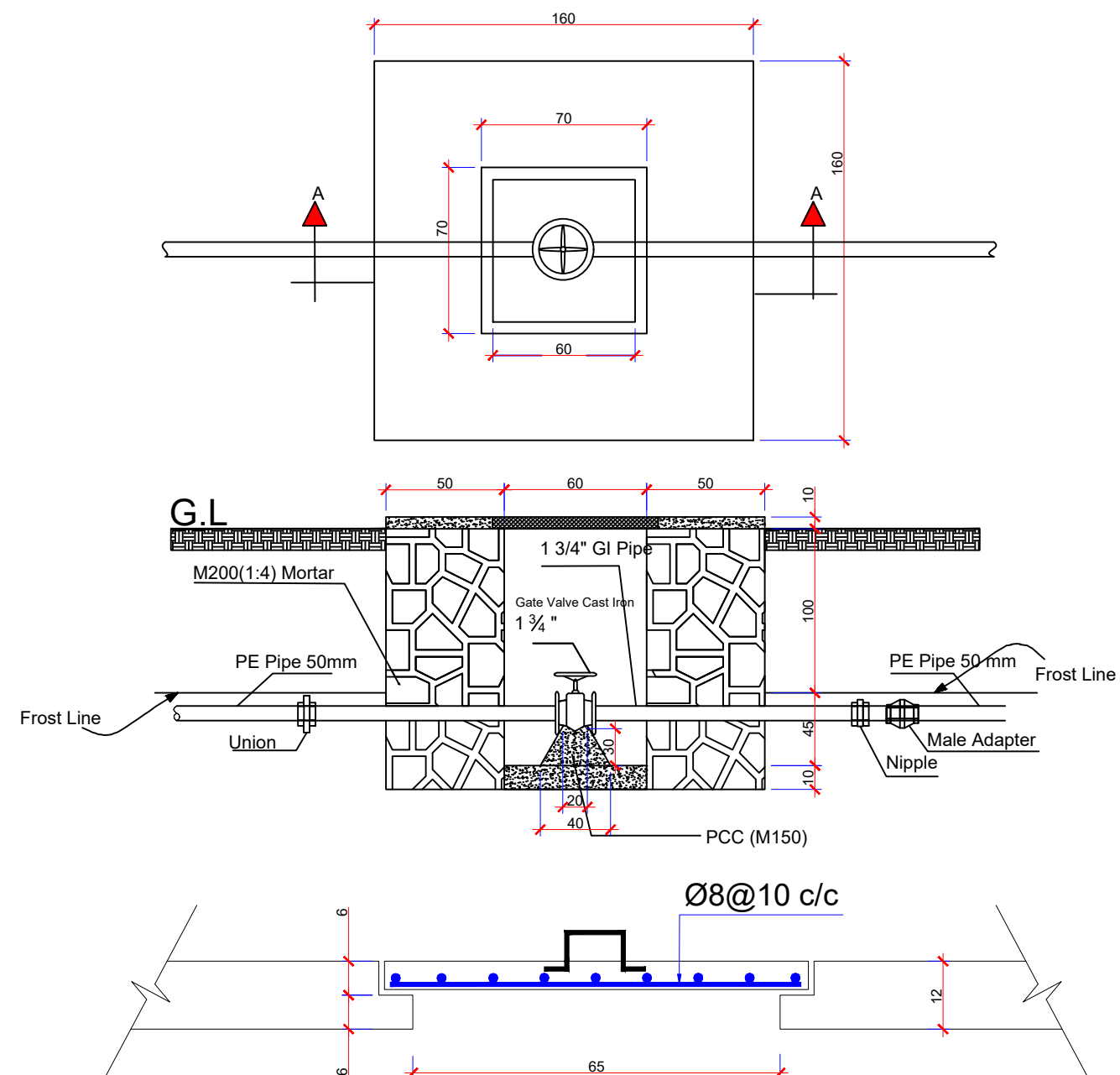
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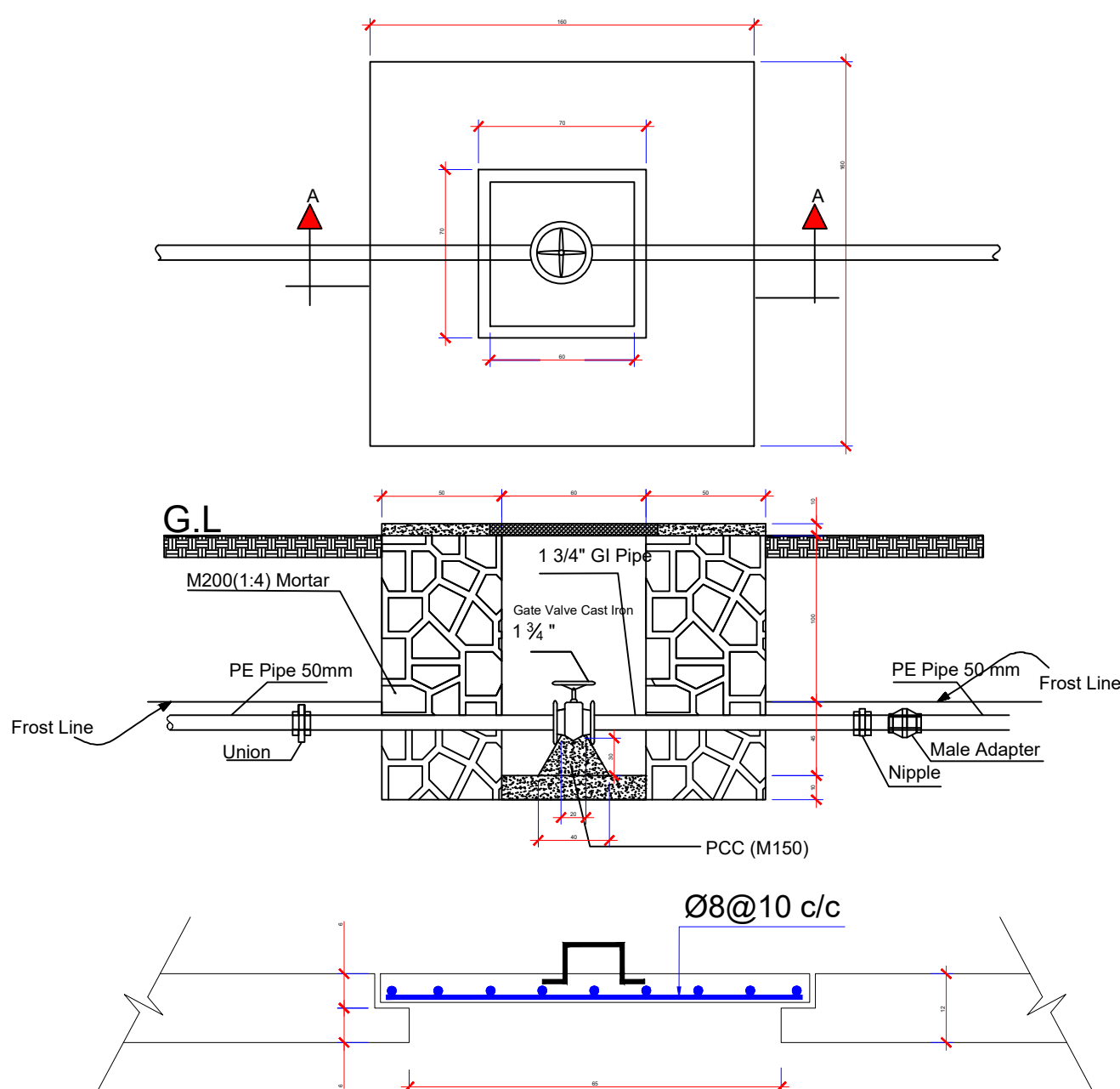
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Prepared by: WASH Engineer	Review by: WASH Advisor	File Name: Drawing.dwg		
		<b>A3</b>	Sheet Reference Number: <b>W-03</b>	
		Plot Date: 31, August, 2024	Plot Scale: NTS	
<b>Solar Area Site Plan and Details</b>				

# Valve Box 1 Details



# Valve Box 2 Details



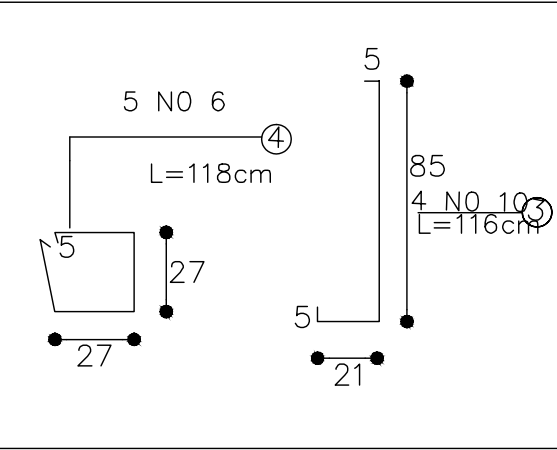
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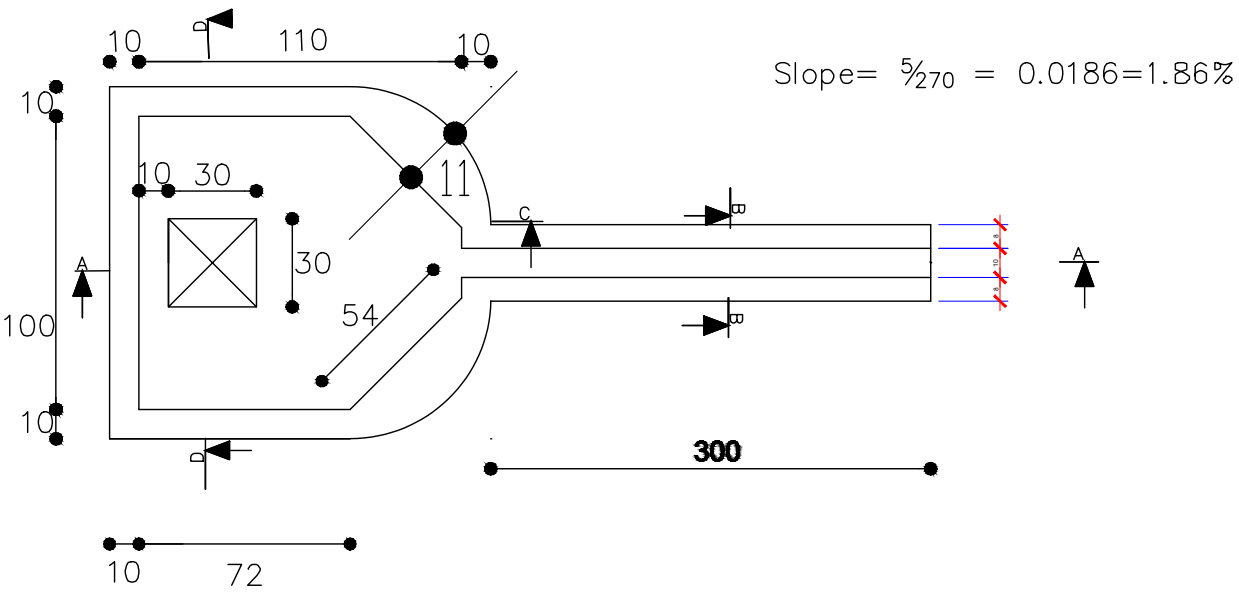
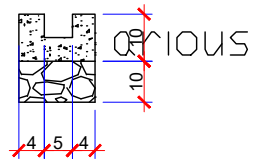
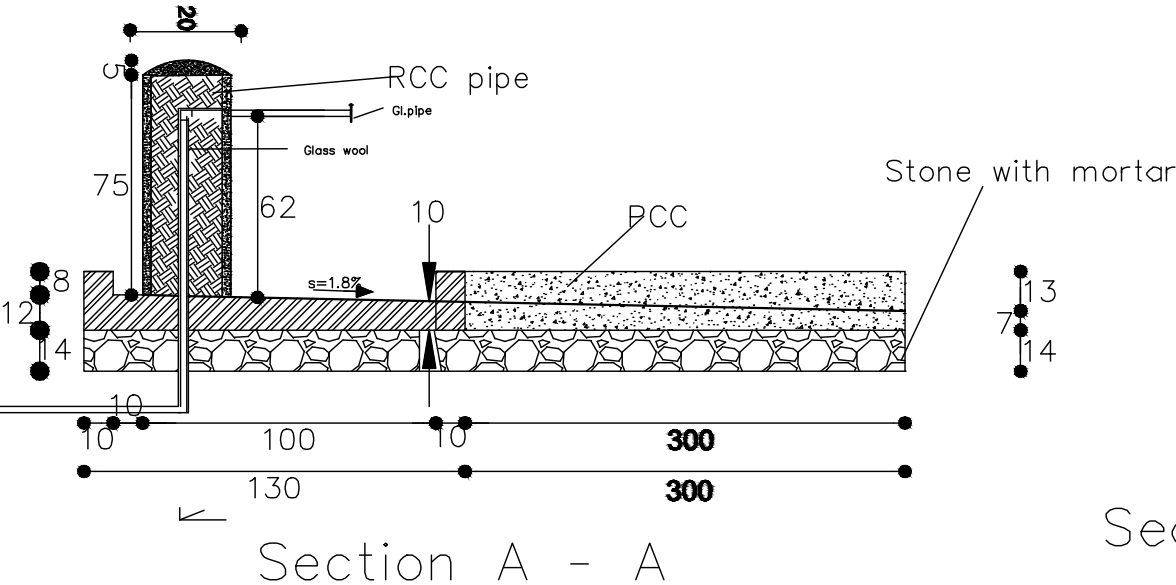
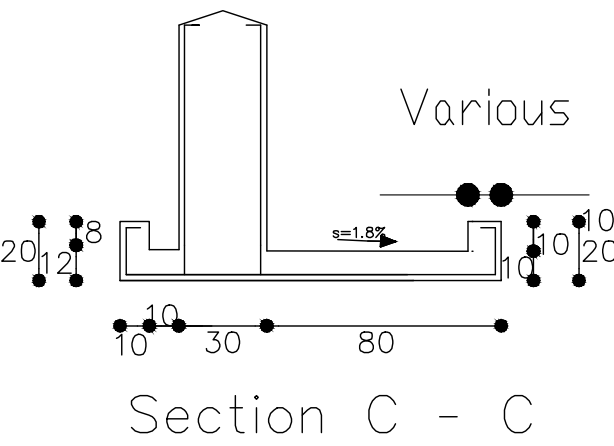
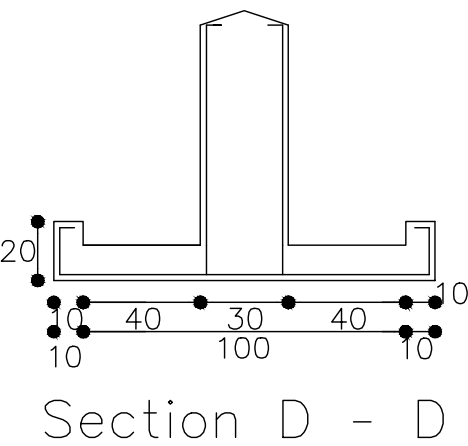
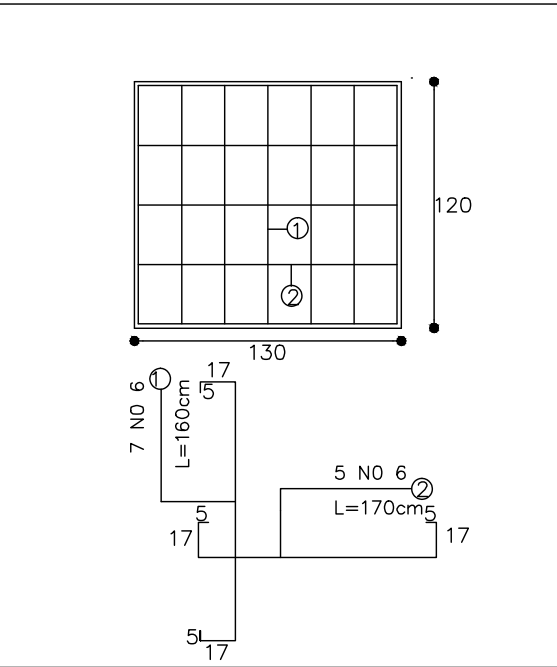


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Prepared by: WASH Engineer	Review by: WASH Advisor		File Name: Drawing.dwg	
			A3	Sheet Reference Number: W-04
			Plot Date: 31, August, 2024	Plot Scale: NTS
Valve box Details				

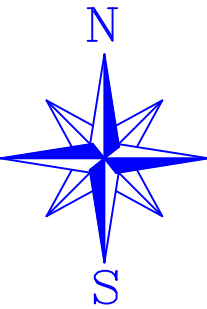
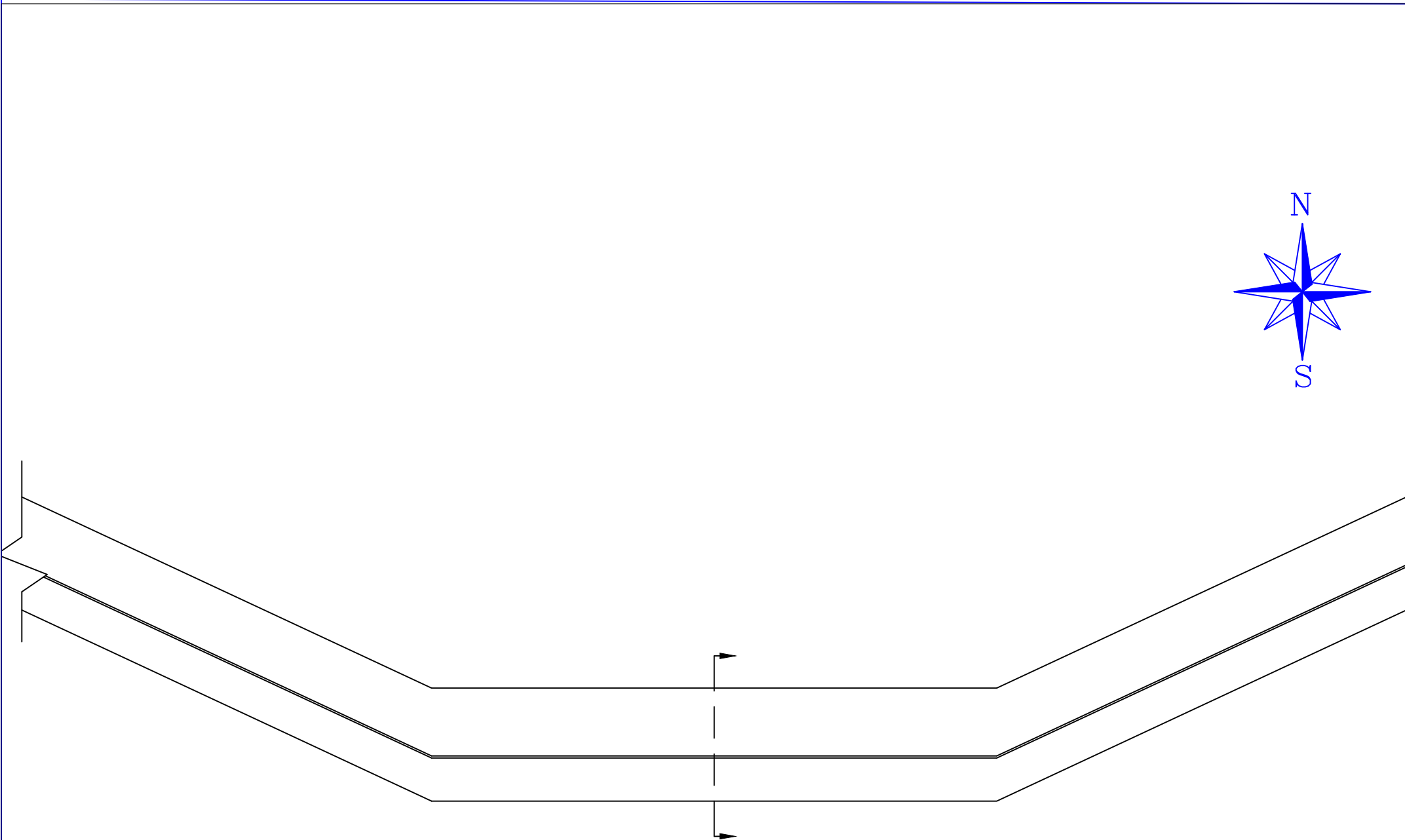
Stand Steel Details



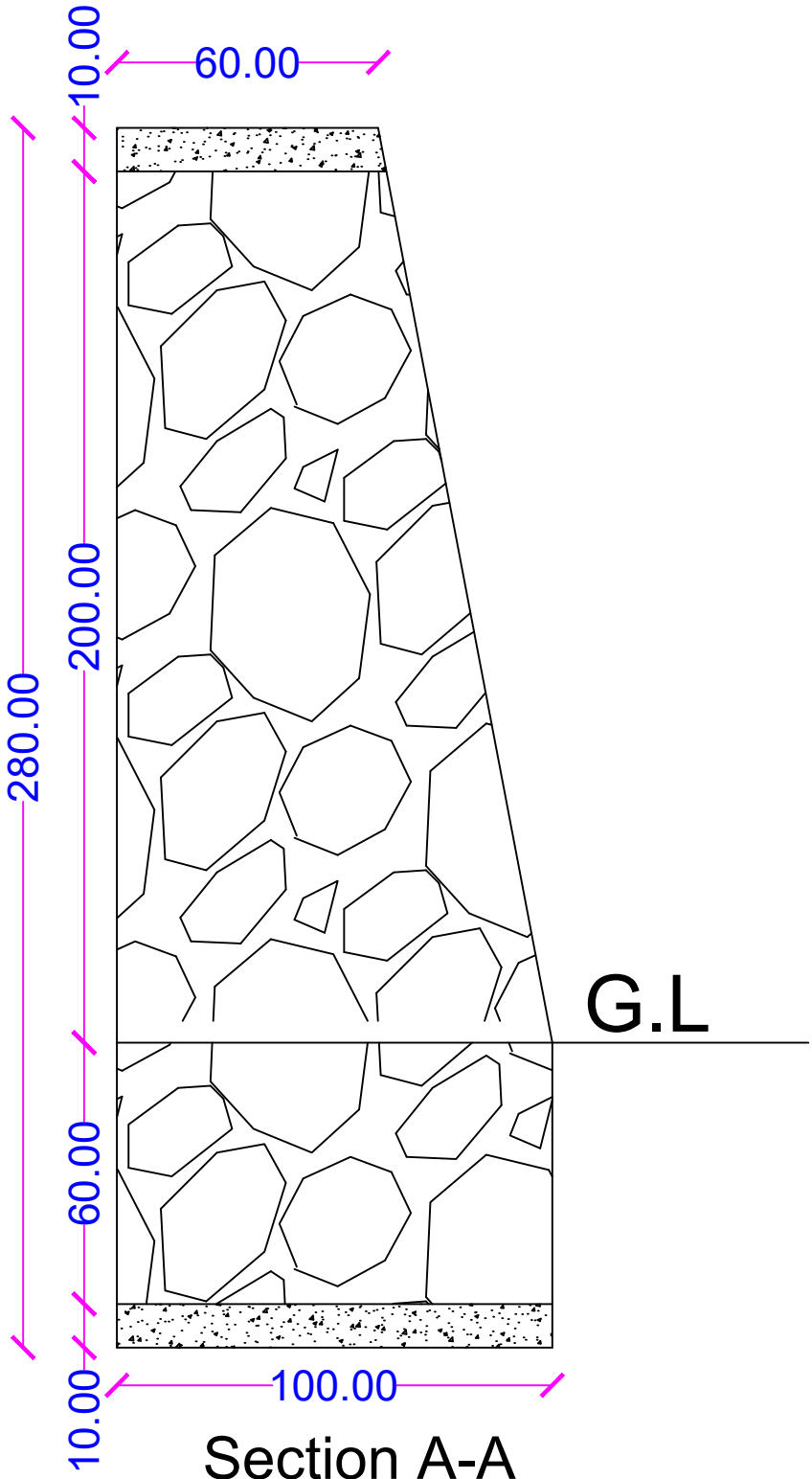
Slab Steel Details



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				A3	Sheet Reference Number: W-05
				Plot Date: 31, August, 2024	Plot Scale: NTS
Stand Tap Structure and Details					



Plan of Retaining wall for Spring Protection Box  
L= 13m



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				A3	Sheet Reference Number: W-06
				Plot Date: 31, August, 2024	Plot Scale: NTS
Retaining Wall structural Detail					