

# DESIGNS AND DRAWINGS.

MASHOUR WATER PROJECT —  
ALBURIQA DISTRICT — ADEN  
GOVERNORATE

PROJECT TITLE:

RAINS OF RESILIENCE

DEVELOPED  
BY:






FUNDED  
BY:



# REHABILITATION OF MASHHOURE WATER SYSTEM:

## DRAWING LIST:

NO	DRAWING TITLE	NO	DRAWING TITLE	NO	DRAWING TITLE
A1- 01	TABLE OF CONTENTS	A1- 14	LIGHTNING PROTECTION SYSTEM	A1- 27	METAL SIGN FOR PROJECT COMPLETION
A1- 02	GENERAL NOTES	A1- 15	SITE LIGHTING DETAILS	A1- 28	PAINTED SIGN FOR PROJECT COMPLETION
A1- 03	SOLAR SITE PLAN	A1- 16	PROTECTION FENCE		
A1- 04	SOLAR MOUNT 3D MODEL VIEW	A1- 17	PROTECTION FENCE DETAILS		
A1- 05	SOLAR MOUNT FRAMING PLAN	A1- 18	MAIN ENTRANCE GATE		
A1- 06	SOLAR FOOTING STRUCTURAL DETAILS	A1- 19	WATER NETWORK PLAN with Map		
A1- 07	SOLAR MOUNT SIDE ELEVATION DETAILS	A1- 20	WATER NETWORK PLAN Zone 1		
A1- 08	SOLAR MOUNT FRAME STRUCTURAL DETAILS	A1- 21	WATER NETWORK PLAN ZONE 2		
A1- 09	MOUNTING FRAME DETAILS	A1- 22	WATER NETWORK PLAN Zone2 without Map		
A1- 10	SUBMERSIBLE PUMP PLUMBING DETAILS	A1- 23	EXCAVATION,BACKFILL,WATER NETWORK DETAILS		
A1- 11	SUBMERSIBLE PUMP WIRING DIAGRAM	A1- 24	VALVE ROOM DETAILS		
A1- 12	COMBINER BOX AND INVERTER MOUNTING BRACKET AND CABLE TRAY	A1- 25	Water Point Side View		
A1- 13	EARTH PIT DETAILS	A1- 26	Water Point Section		

Prepared by: 	Funded by: 	Project Title: REHABILITATIONS OF AI MASHOURE WATER PROJECT	Drawing Title: <b>Table of contents</b>	Designed and reviewed by: SPRY - WASH Sector	Status: <b>Final Draft</b>		North: 	Drawing No: <b>A1-01</b>
		Project Location: ALBREYQA DISTRICT - ADEN GOV.	Project Name: RAINS OF RESILIENCE 2026	Approved by: SPRY - WASH Sector	Project No:	Paper Size: <b>A3</b>		

## General Notes:

- 1- The concrete cover at the footings is 5 cm  
In the beams ,columns ,walls ,floor and roof of the tank 5 cm.
- 2- All concrete work for the footings ,columns ,bridges ,and tank body must be carried out according to the resistance mentioned in the table of quantities and according to the specified mixing ratios ,and the amount of water should not exceed 180liters/cubic meter of concrete .The water must be non-salty ,pure ,and contain cement according to the line ratios specified in the table of quantities ,with tests conducted .Necessary for construction materials ,concrete cube samples ,and all that is necessary ,according to the engineer's instructions.
- 3- The strength of the steel used for all structural concrete elements is not less than 280 Newton/mm2.
- 4- The wood and concrete molds that the contractor will use for concrete works must be clean ,new ,and not out service or not good.
- 5- The concrete must be sprayed and immersed in pure water throughout the day and for a period of not less than 10days .The columns ,suspension bridges ,and the tank body from the outside must be bagged with special mesh bags for the spraying process ,and they must be saturated with water throughout the day and night at every hour.
- 6- Samples of all materials used must be approved by the engineer before they are supplied.
- 7- The engineer must be notified upon completion of the woodwork to receive it ,as well as the ironwork .Casting cannot be completed except in the presence of the engineer ,and he must be notified one day before the appointment.
- 8- All work must be carried out according to what is shown in the items in the tables of quantities and drawings.
- 09- The length of the main steel connection to the columns between the floors is not less than 80 cm.
- 10- The sand (nisse) used in all concrete and cladding works must be first-class crushed stone, number one basalt stone, and not mixed with impurities that absorb water and weaken the strength of the concrete.

## ملاحظات عامة:

- 1- الغطاء الخرسانى فى القواعد 5 سم وفى الجسور والاعمدة وجدران وارضية وسقف الخزان 3 سم.
- 2- يجب تنفيذ جميع اعمال الخرسانات للقواعد والاعمدة والجسور وجسم الخزان بحسب المقاومة المذكوره فى جدول الكميات وبحسب نسب الخلط المحددة وكمية المياه لاتزيد عن 180 لتر/متر مكعب خرسانة ويجب ان تكون المياه غير مالحة ونقية وبمحتوي اسمنتى بحسب نسب الخط المحددة بجدول الكميات مع اجراء الاختبارات اللازمة لمواد الانشاء وعينات المكعبات الخرسانية وجميع مايلزم وبحسب تعليمات المهندس.
- 3- قوة الحديد المستخدم لجميع العناصر الخرسانية الانشائية لاتقل عن 280 نيوتن/ملم2.
- 4- يجب ان تكون الاخشاب وقوالب الخرسانة التى سيستخدمها المقاول للاعمال الخرسانة نظيفة اوجديدة وغير متهاله.
- 5- يجب الرش وغمر الخرسانة بالمياه النقية طوال اليوم و لمدة لاتقل عن 10ايام الاعمده والجسور المعلقه وجسم الخزان من الخارج يجب عمل لها تكييس باكياس شلثيته حيش خاصة بعملية الرش ويتم تشبييعها بالمياه طول النهار والليل علا كل ساعة .
- 6- يجب اعتماد عينات لجميع المواد المستخدمة من قبل المهندس قبل توريدها.
- 7- يجب ابلاغ المهندس عند الانتهاء من اعمال التخشييه لاستلامها وكذلك من اعمال ،الحديد ولا يتم الصب الا بحضور المهندس ويجب ابلاغه قبل الموعد بيوم واحد.
- 8- يجب تنفيذ جميع الاعمال بحسب ما هو موضح فى بنود جداول الكميات والرسومات.
- 9- طول الاشتراك الحديد الرئيسى للاعمدة بين الادوار لا تقل عن 100 سم.
- 10- الرمل (النيس) المستخدم فى جميع اعمال الخرسانات والتلابيس يلزم ان يكون وهطي درجه اولي والكري كساره رقم واحد من الاحجار البازلتيه و غير مخلوط بالشوائب التى تمتص المياه وتضعف قوة الخرسانه.

Prepared by:



Funded by:



Project Title:

REHABILITATIONS OF AL MASHOURE WATER PROJECT

Project Location:

ALBREYQA DISTRICT - ADEN GOV.

Drawing Title:

GENERAL NOTES

Project Name:

RAINS OF RESILIENCE 2026

Designed and reviewed by:

SPRY - WASH Sector

Approved by:

SPRY - WASH Sector

Status:

Final Draft

Project No:

09/06/2026

Paper Size: A3

Scale

As Shown

North:

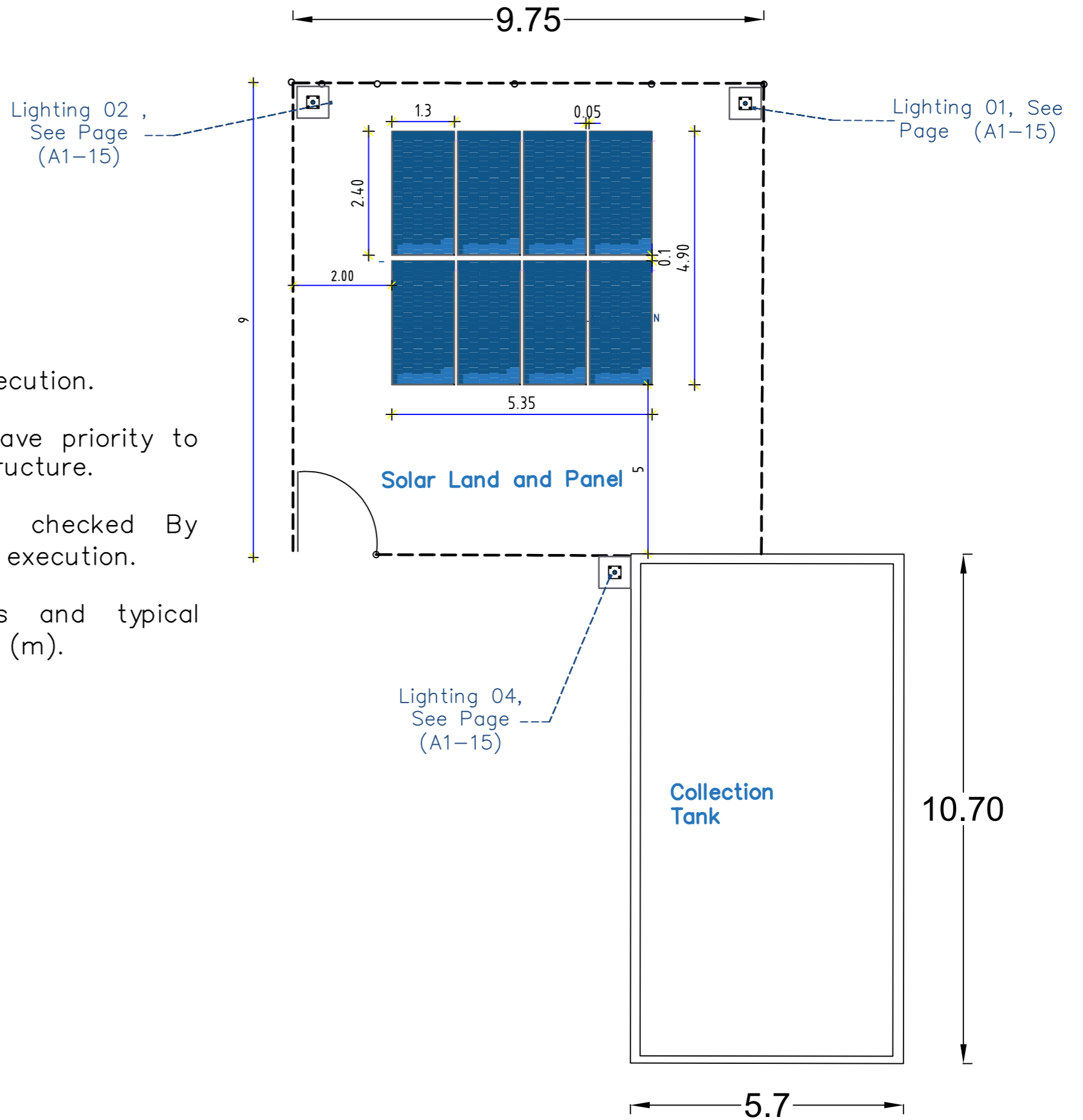





Drawing No:

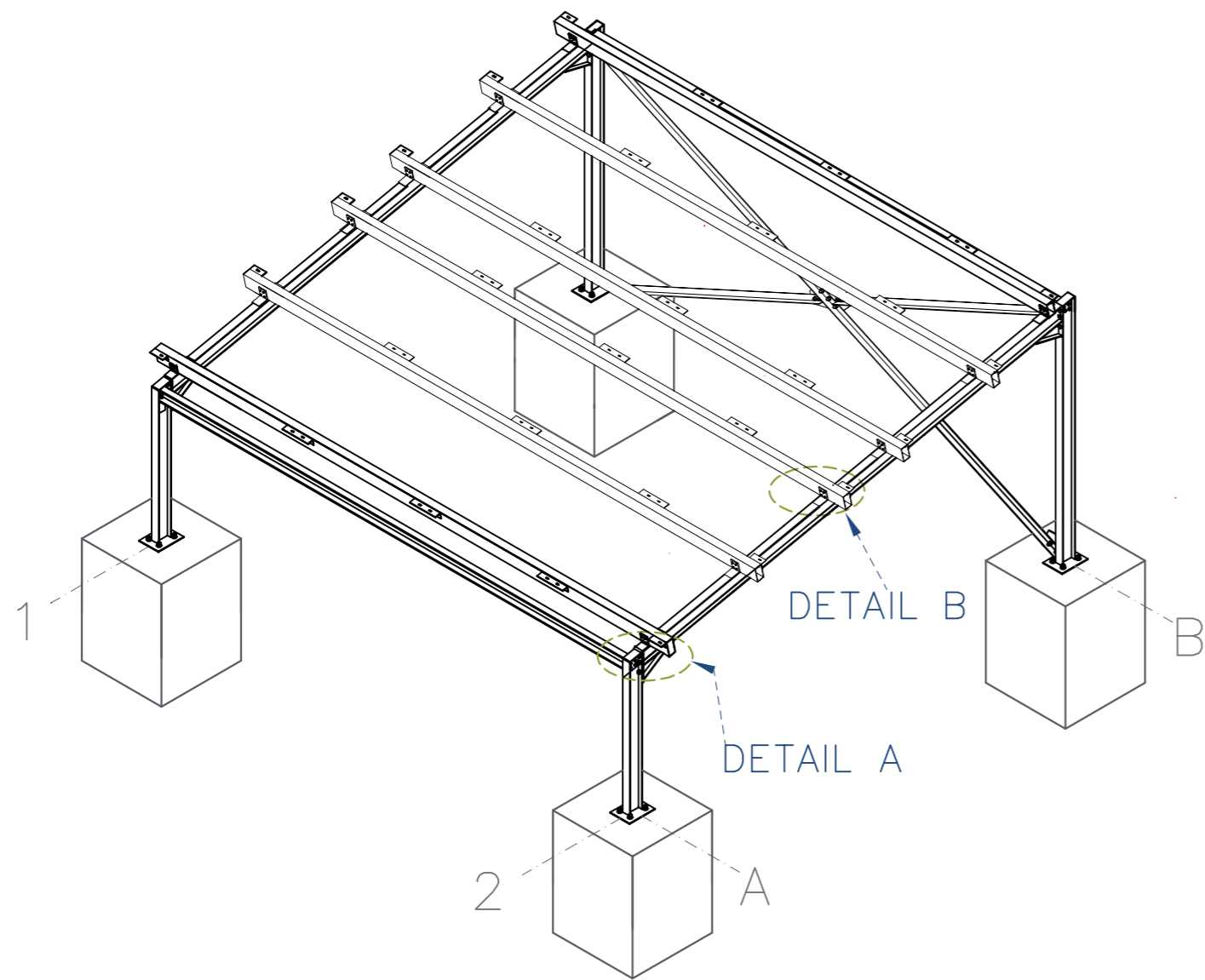
A1-02

Notes:

1. All the dimensions should be checked before execution.
2. The main items and details of the drawings have priority to general main items and typical drawings of the structure.
3. All the Drawings , BoQs Items should be checked By Contractor with Samaritan Purse's Engineer before execution.
4. Unless otherwise mentioned in the drawings and typical detailed drawings, unit of the dimension is meter (m).

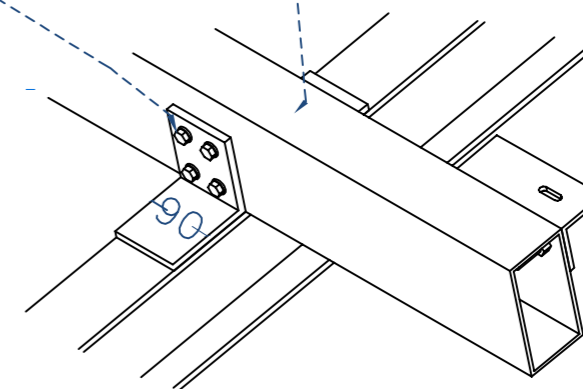


Prepared by: 	Funded by: 	Project Title: REHABILITATIONS OF AI MASHOURE WATER PROJECT	Drawing Title: Solar Site plan	Designed and reviewed by: SPRY - WASH Sector	Status: Final Draft	North: 	Drawing No: A1-03
		Project Location: ALBREYQA DISTRICT - ADEN GOV.	Project Name: RAINS OF RESILIENCE 2026	Approved by: SPRY - WASH Sector	Project No: Date: 09/06/2026	Paper Size: A3 Scale: As Shown	



(JT3)STAINLESS STEEL SELF-DRILLING FASTENERS

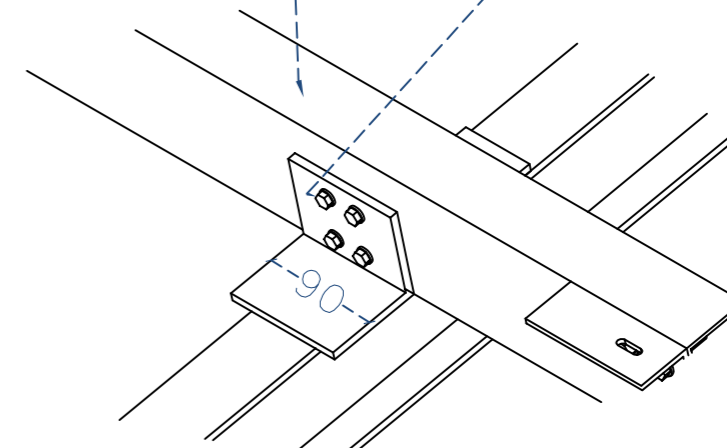
GALVANIZED HSS (100X50X1.80)mm



JOINT – DETAIL B

GALVANIZED HSS (100X50X1.80)mm

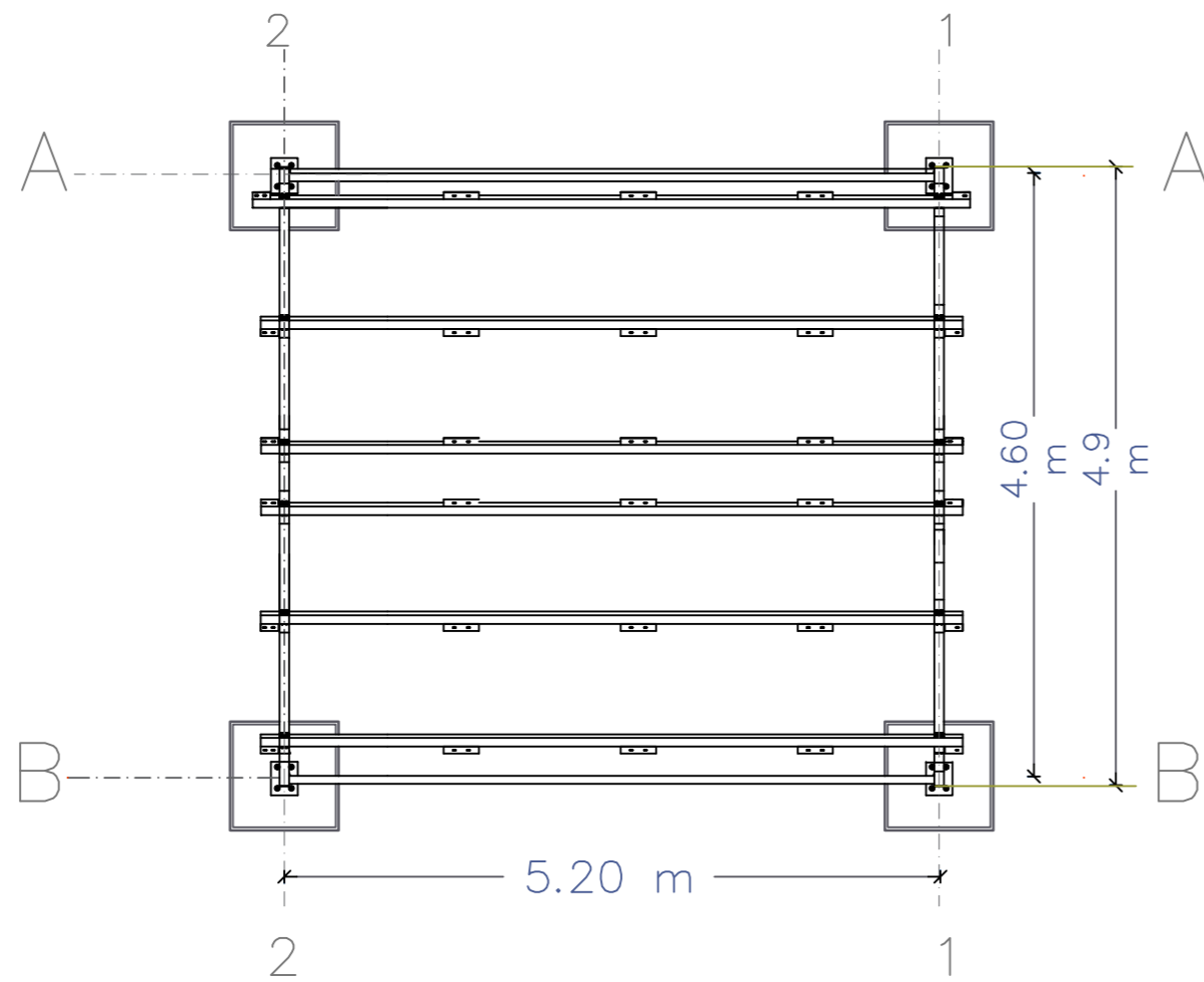
(JT3)STAINLESS STEEL SELF-DRILLING FASTENERS



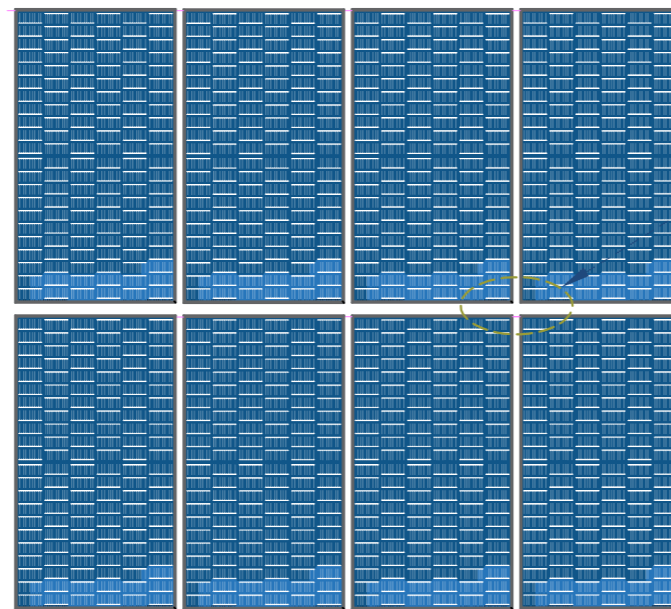
JOINT – DETAIL A

### 3D VIEW

Prepared by: 	Funded by: 	Project Title: REHABILITATIONS OF AI MASHOURE WATER PROJECT	Drawing Title: SOLAR MOUNT 3D MODEL VIEW	Designed and reviewed by: SPRY - WASH Sector	Status: <b>Final Draft</b>	North: 	Drawing No: <b>A1-04</b>
		Project Location: ALBREYQA DISTRACT – ADEN GOV.	Project Name: RAINS OF RESILIENCE 2026	Approved by: SPRY - WASH Sector	Project No: Date: 09/06/2026	Paper Size: <b>A3</b> Scale: <b>As Shown</b>	

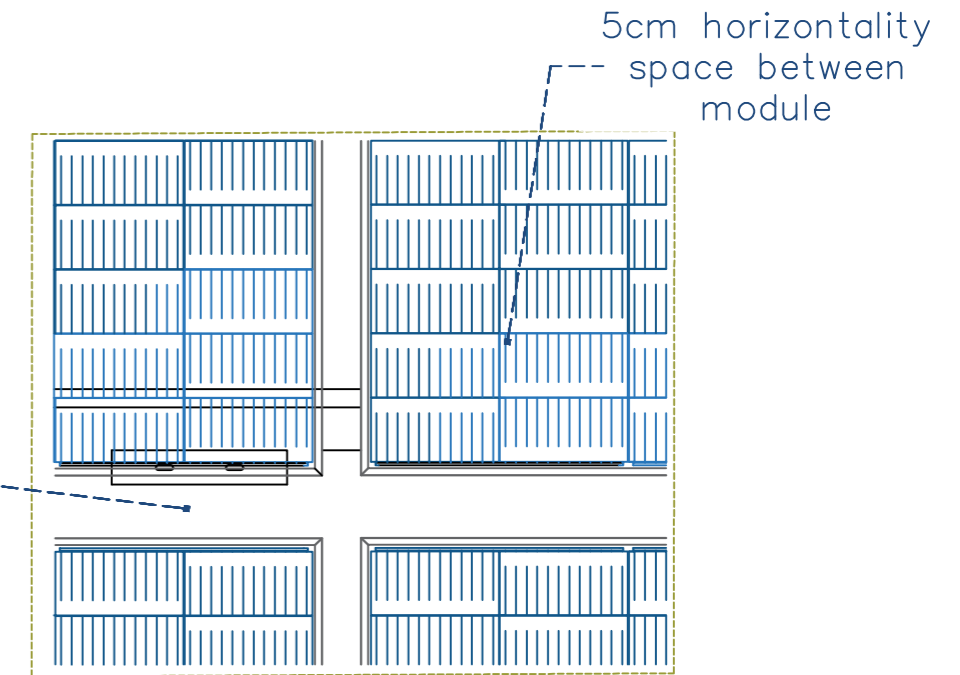


FRAMING PLAN

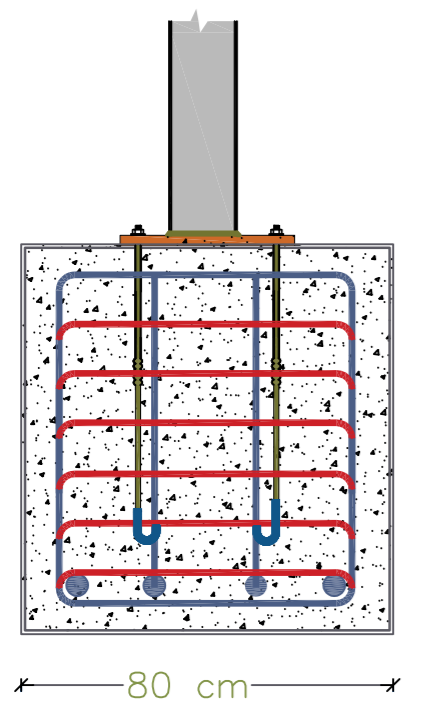
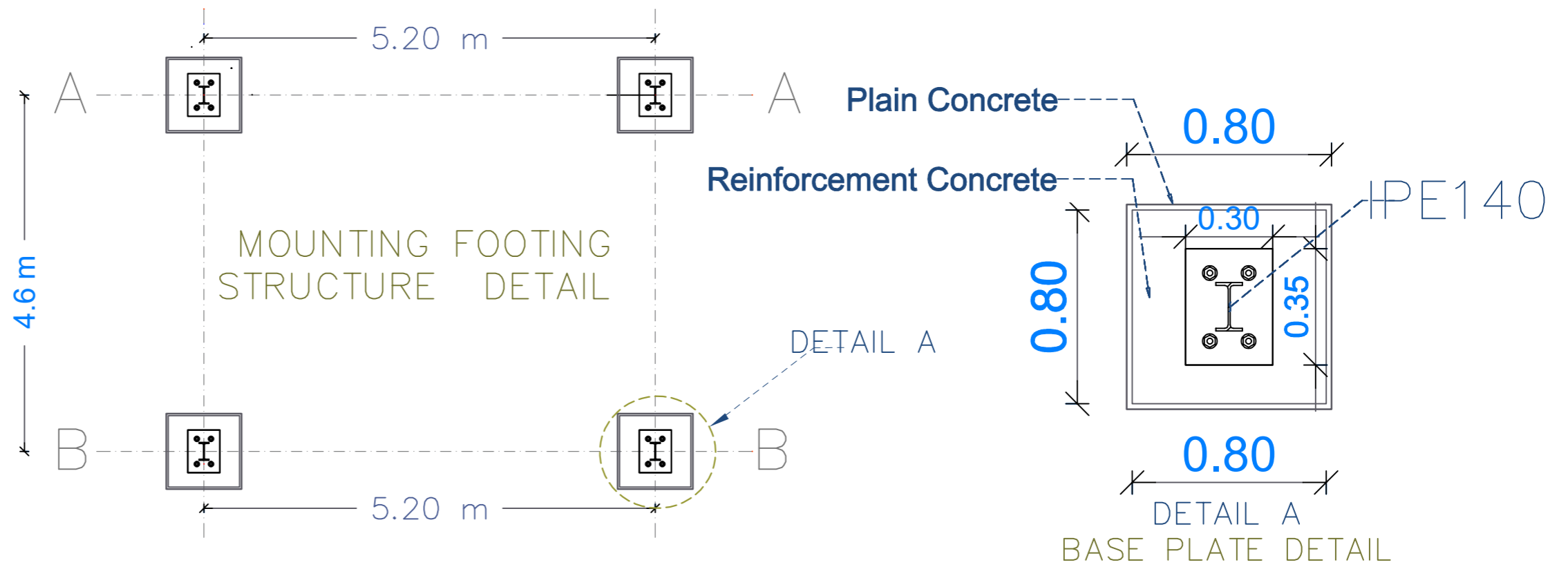


PLAN OF SOLAR PANEL ARRAY

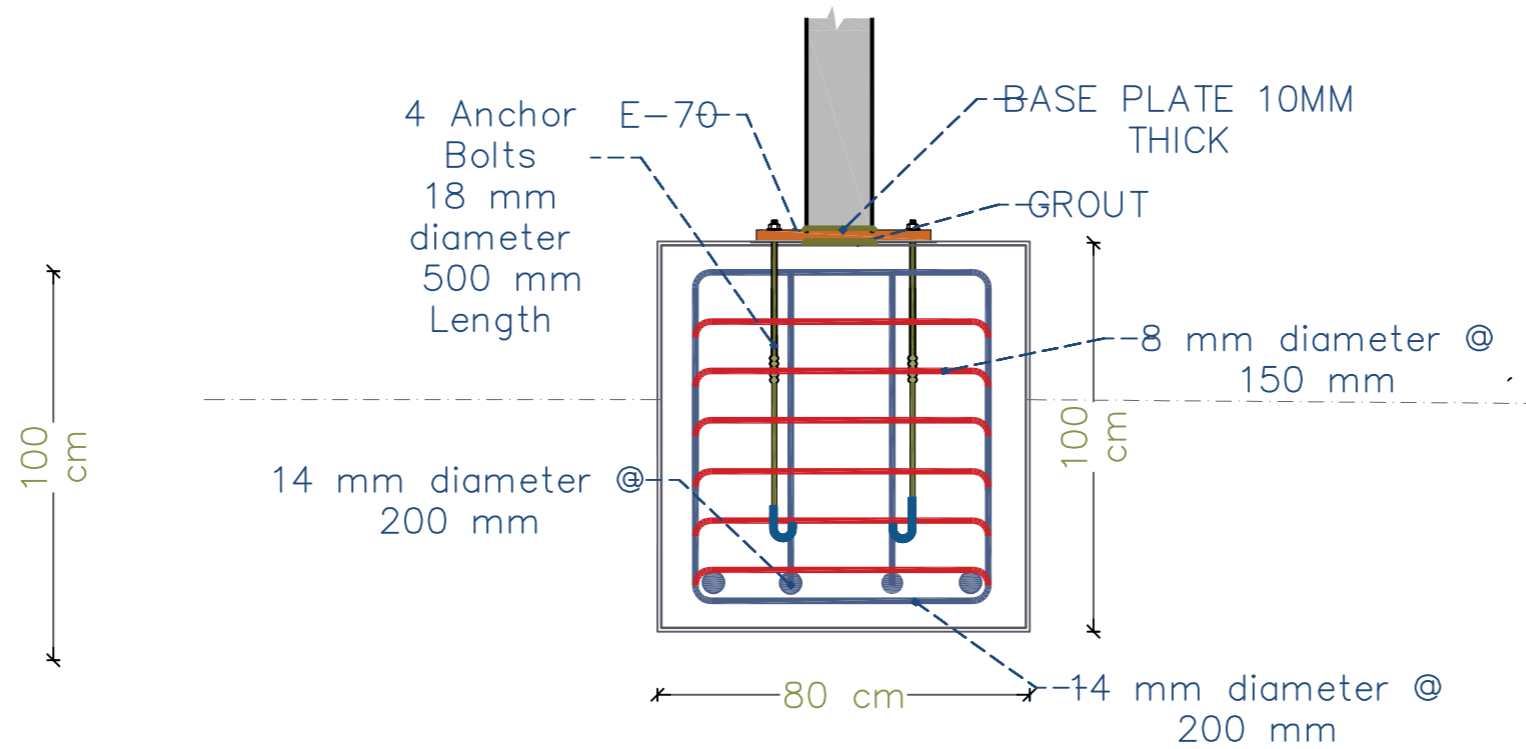
FULL FRAMING PLAN



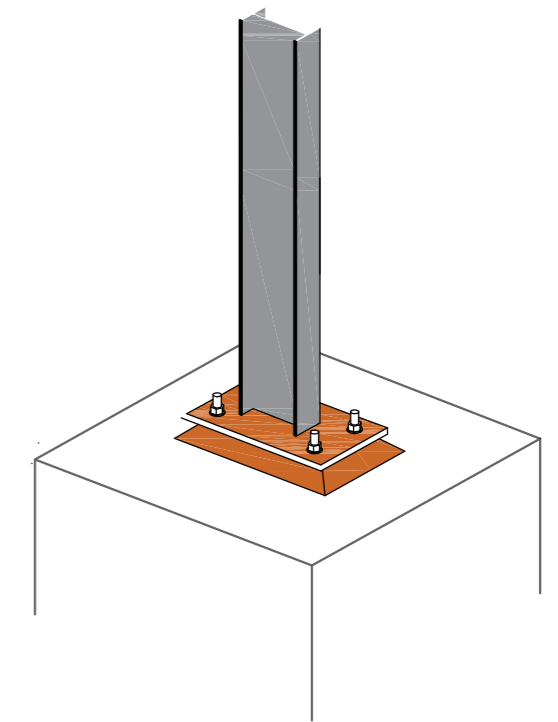
SOLAR PANEL DETAIL A



CONCRETE FOOTING DETAIL



BASE PLATE DETAIL



BASE PLATE DETAIL

Prepared by:



Funded by:



Project Title:  
REHABILITATIONS OF AL MASHOURE WATER PROJECT

Project Location:  
ALBREYQA DISTRICT - ADEN GOV.

Drawing Title:  
SOLAR FOOTING STRUCTURAL DETAIL

Project Name:  
RAINS OF RESILIENCE 2026

Designed and reviewed by:  
SPRY - WASH Sector

Approved by:  
SPRY - WASH Sector

Status:

Final Draft

Project No:

Date

09/06/2026

Paper Size: A3

Scale

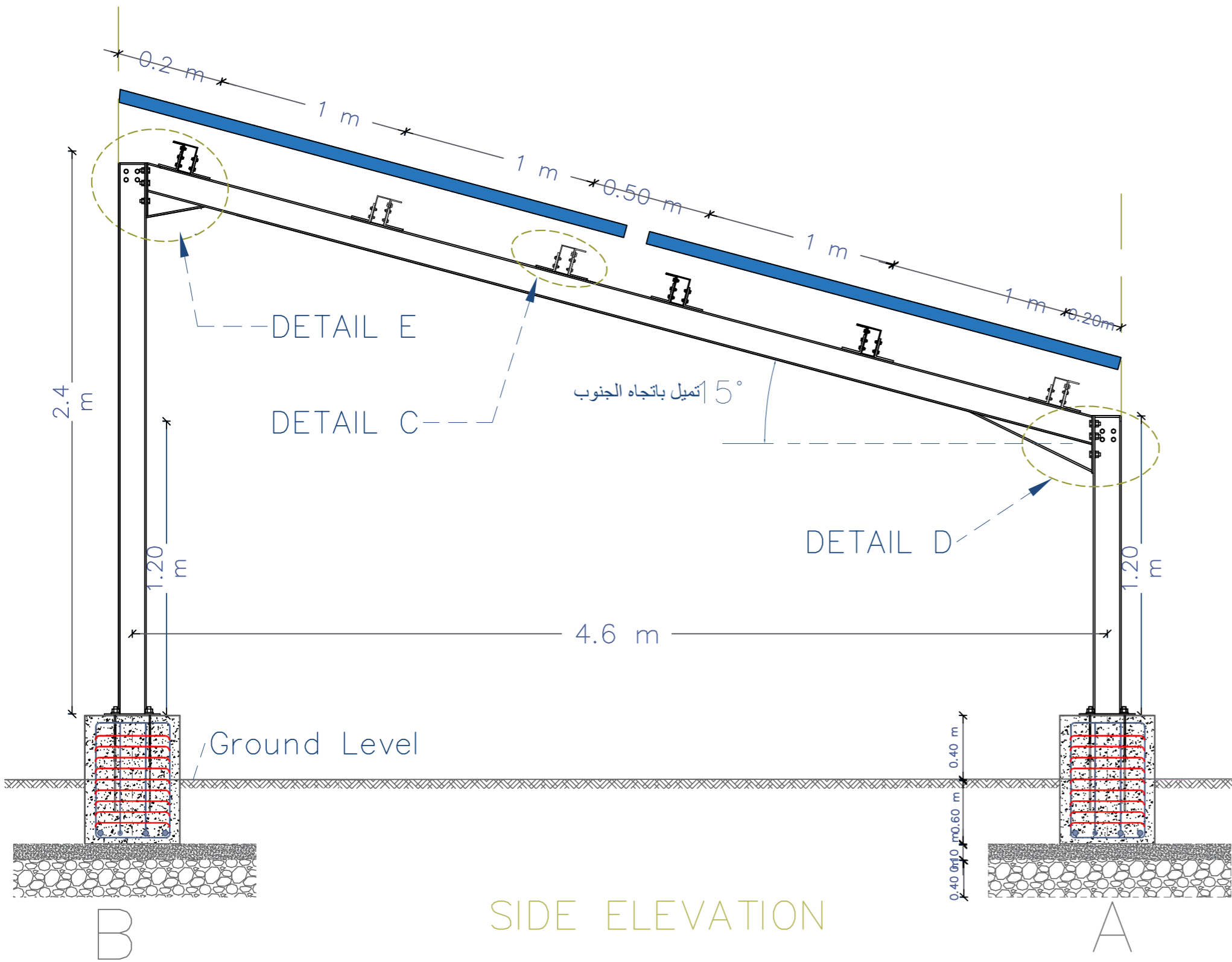
As Shown

North:

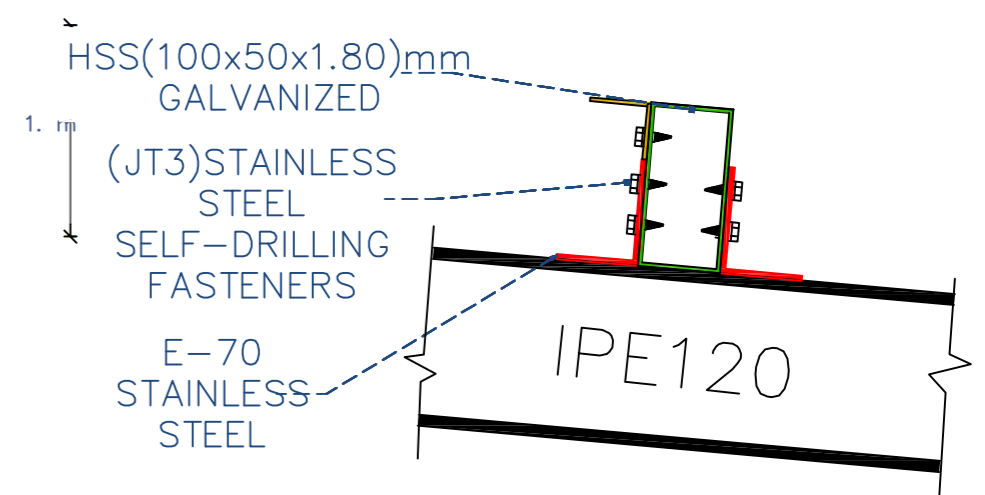
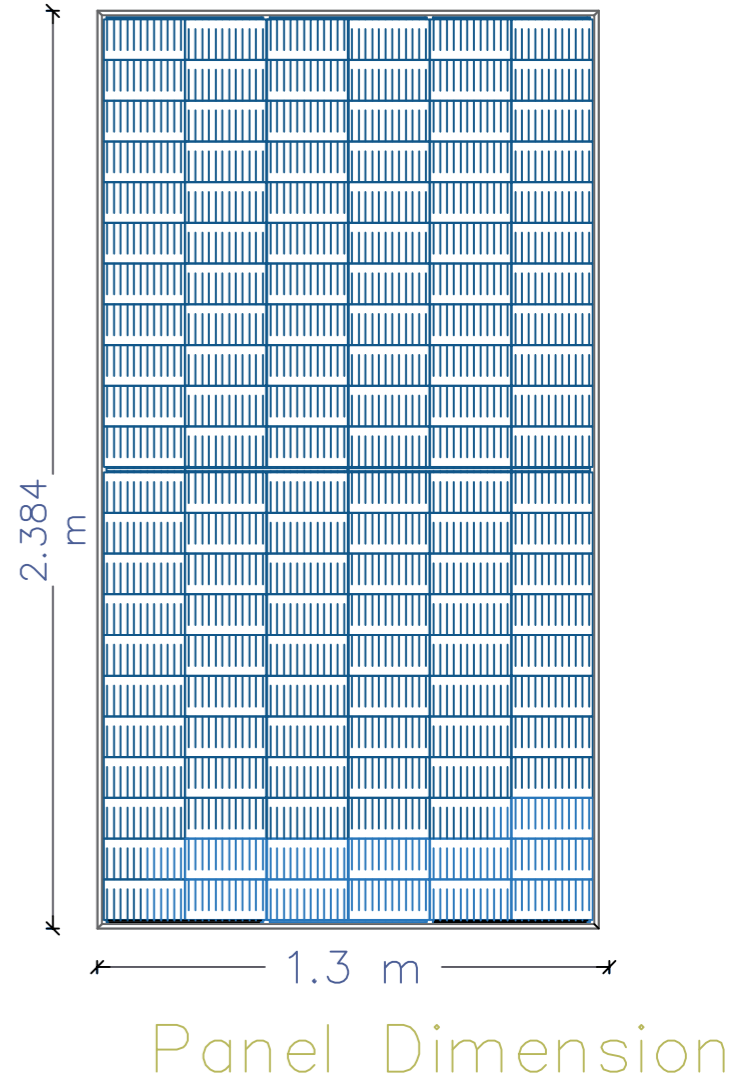


Drawing No:

A1-06

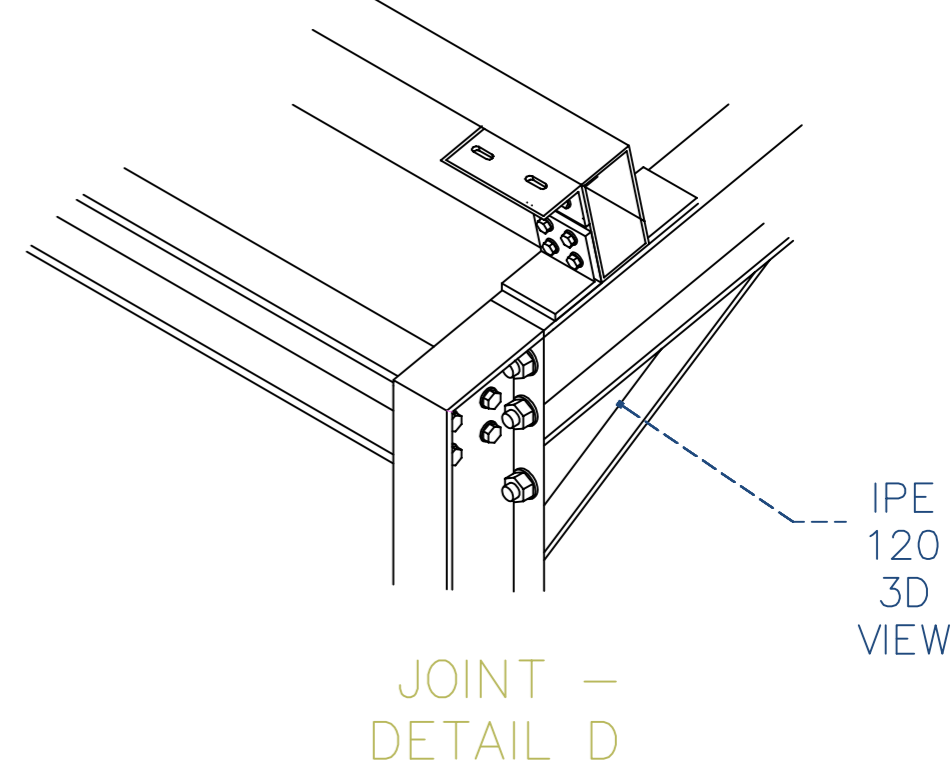
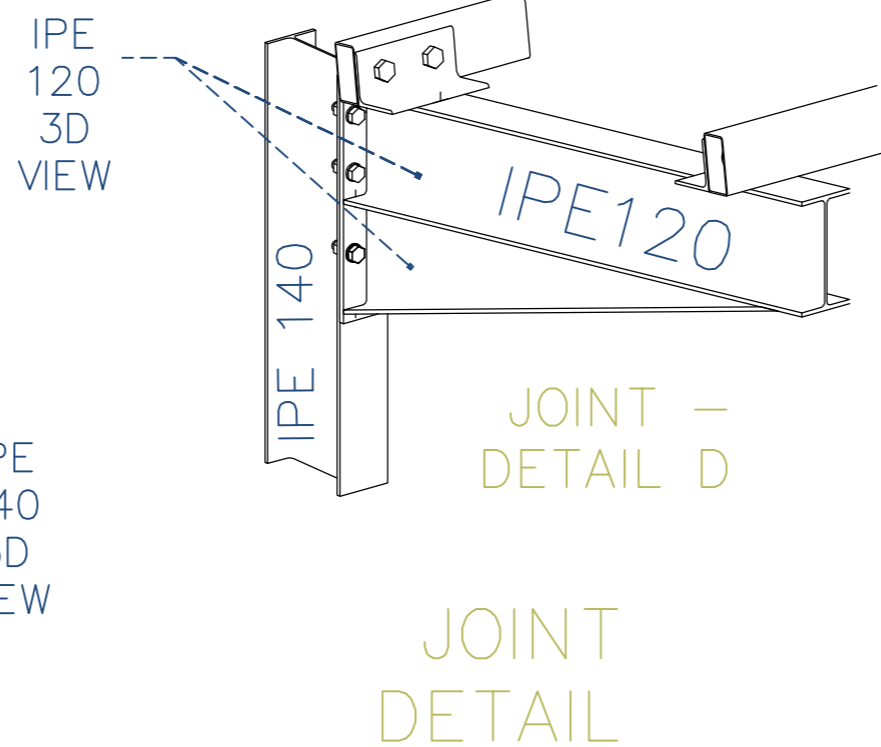
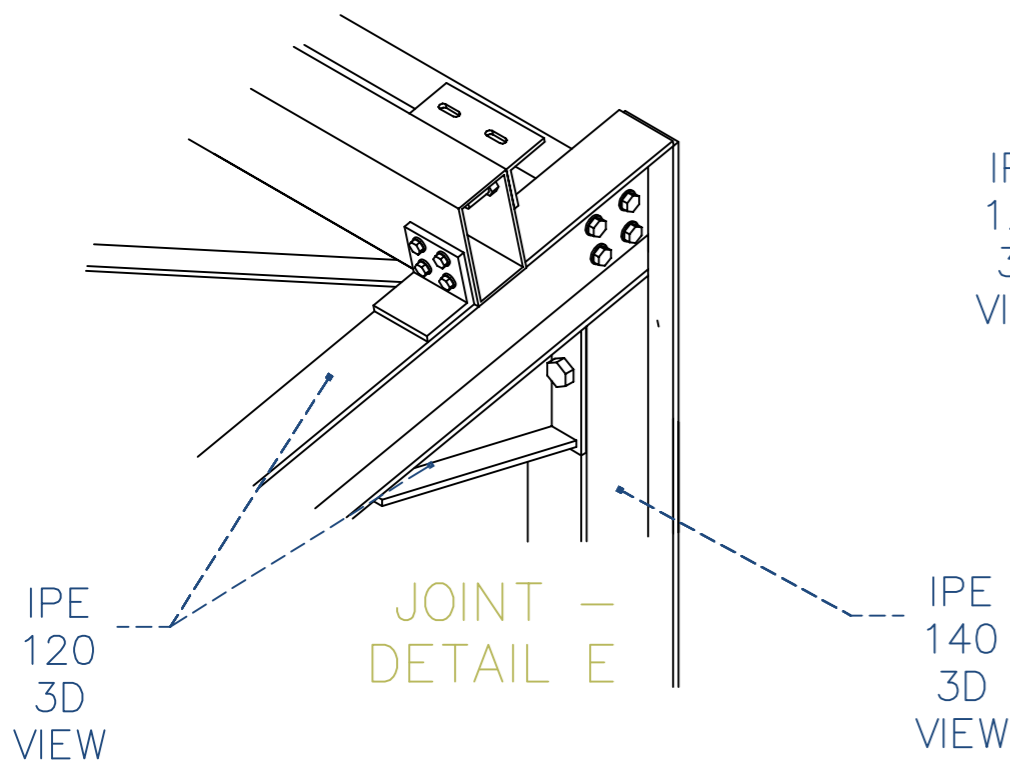
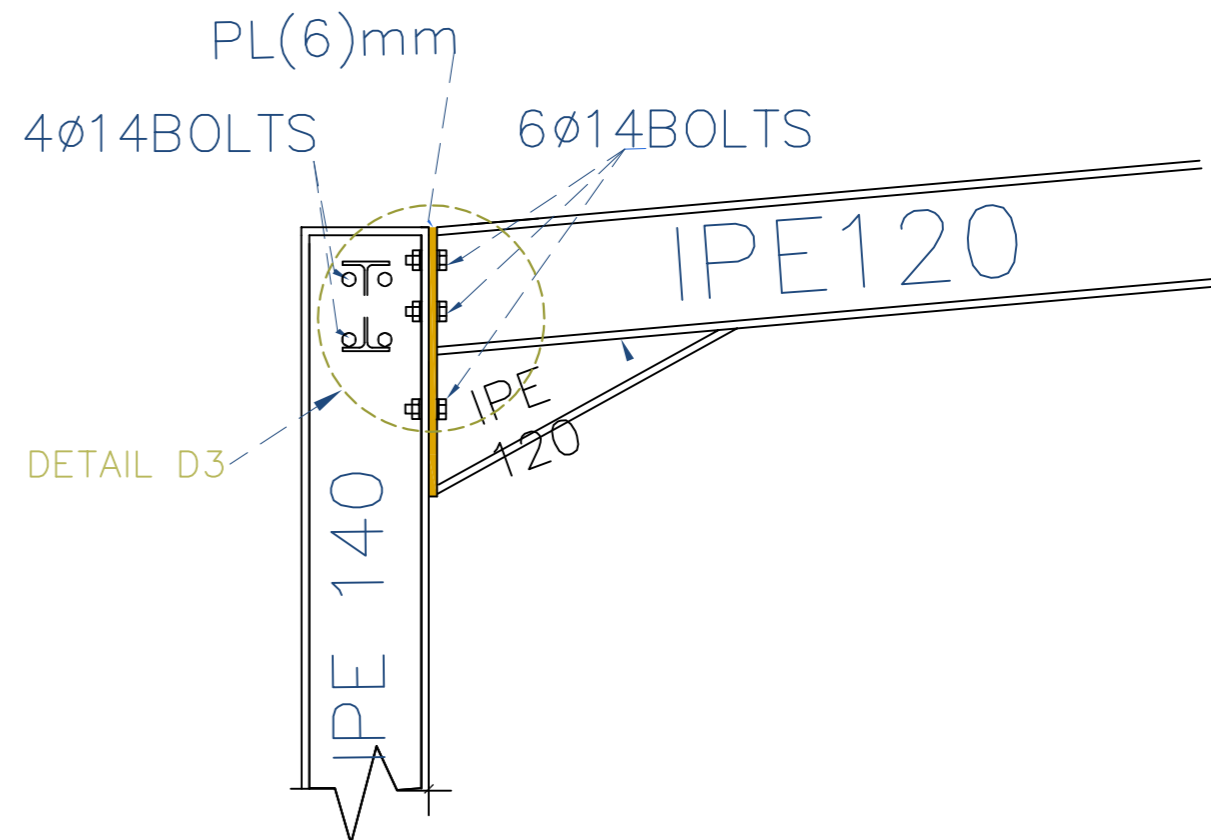
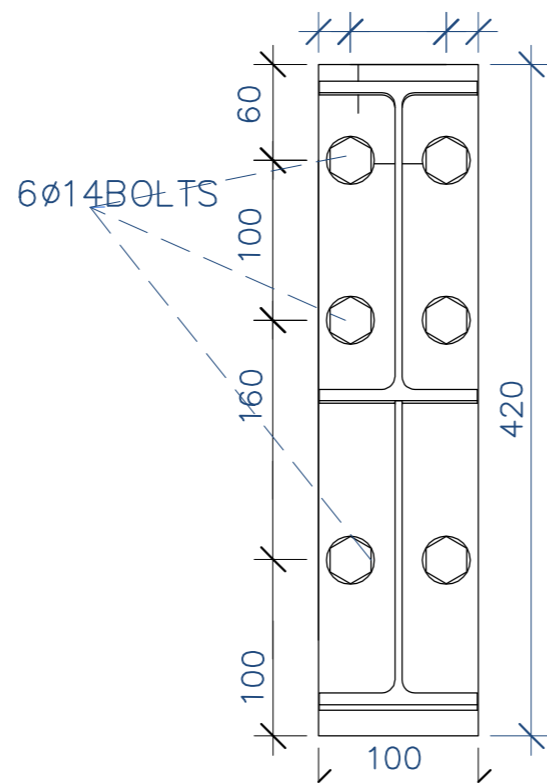
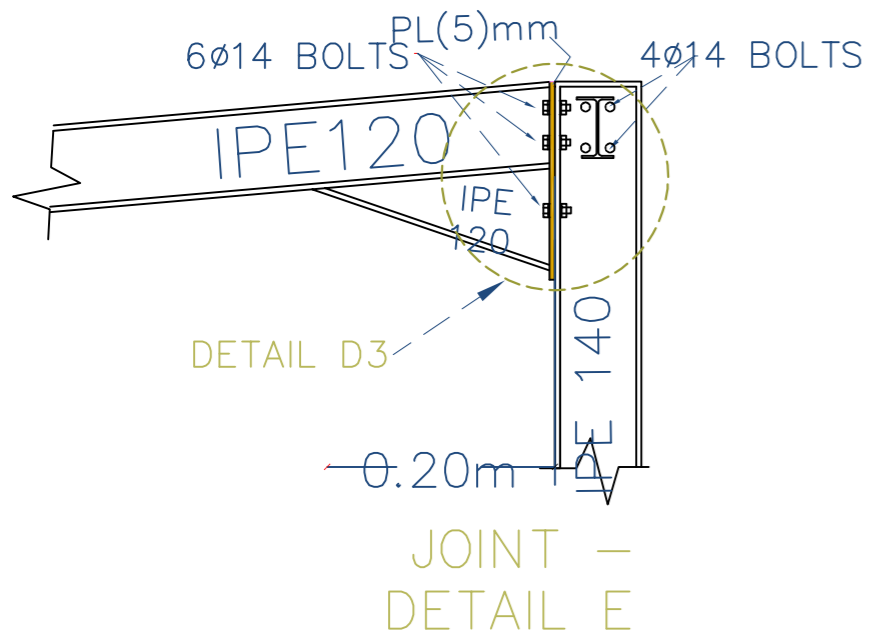


SIDE ELEVATION



JOINT —  
DETAIL C

Prepared by: Samaritan's Purse® INTERNATIONAL RELIEF	Funded by: Samaritan's Purse® INTERNATIONAL RELIEF	Project Title: REHABILITATIONS OF AL MASHOURE WATER PROJECT	Drawing Title: SOLAR MOUNT SIDE ELEVATION DETAILS	Designed and reviewed by: SPRY - WASH Sector	Status: Final Draft	North: N W E S	Drawing No: A1-07
		Project Location: ALBREYQA DISTRICT - ADEN GOV.	Project Name: RAINS OF RESILIENCE 2026	Approved by: SPRY - WASH Sector	Project No: Date: 09/06/2026		



Prepared by:



Funded by:



Project Title:  
REHABILITATIONS OF AI  
MASHOURA WATER PROJECT

Project Location:  
ALBREYQA DISTRICT —  
ADEN GOV.

Drawing Title:  
SOLAR MOUNT FRAME STRUCTURAL DETAILS

Project Name:  
RAINS OF RESILIENCE 2026

Designed and reviewed by:  
SPRY - WASH Sector

Approved by:  
SPRY - WASH Sector

Status:

**Final Draft**

Project No:

Date

09/06/2026

Paper Size: **A3**

Scale

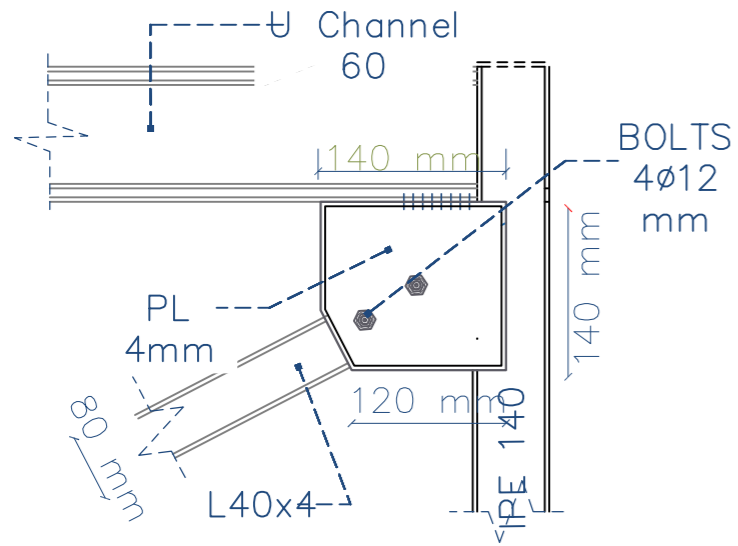
As Shown

North:

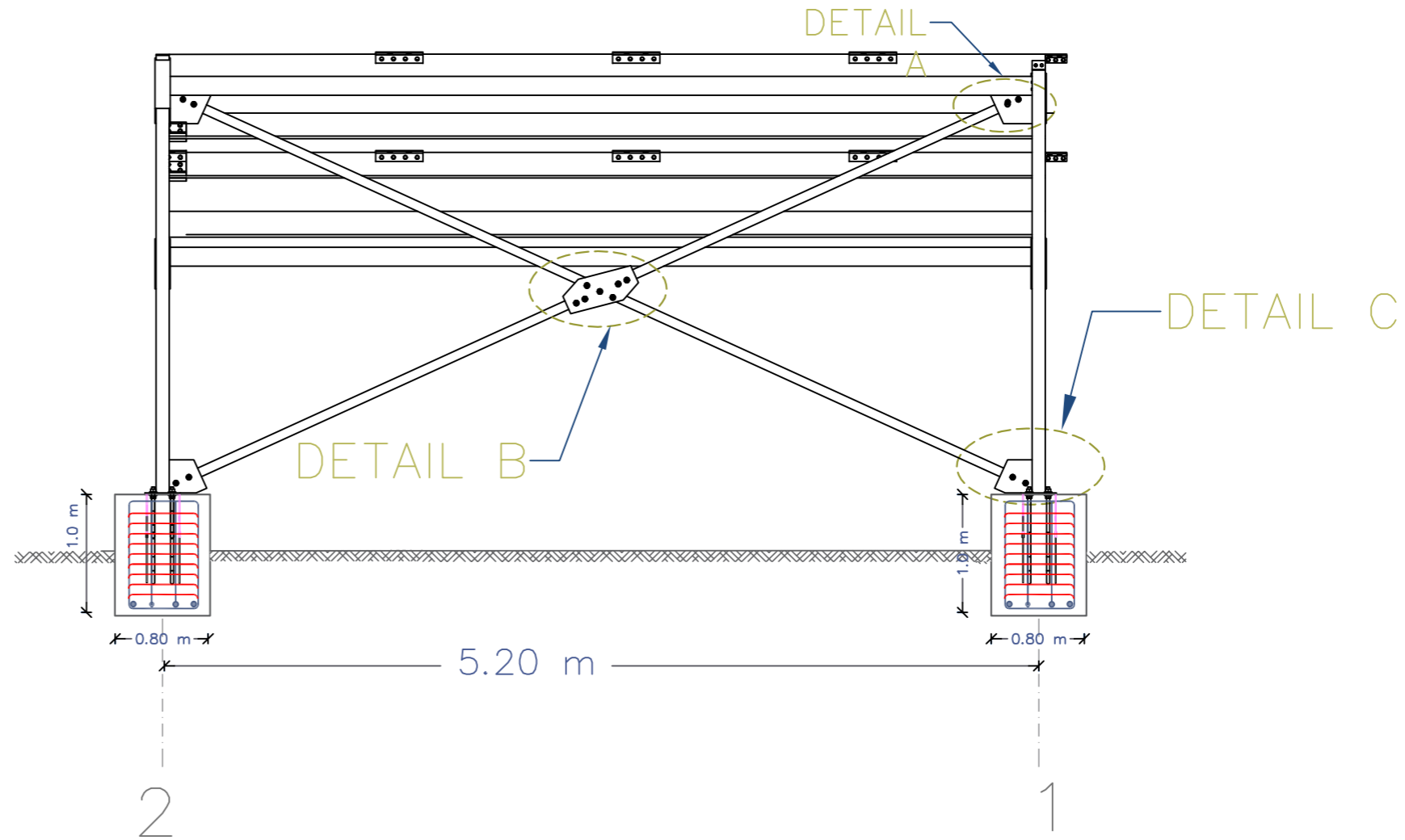


Drawing No:

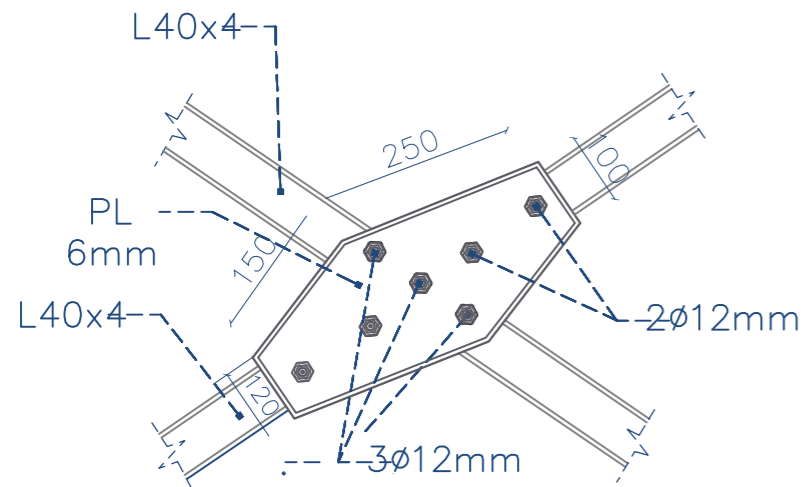
**A1-08**



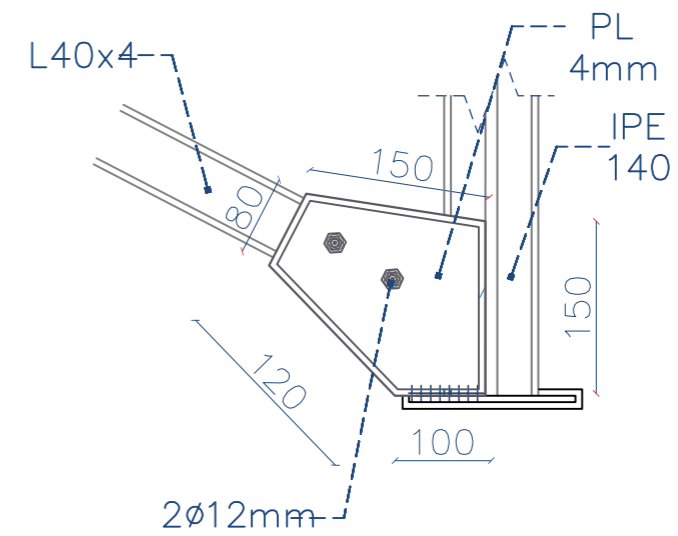
JOINT —  
DETAIL A



BACK ELEVATION



JOINT —  
DETAIL B



JOINT —  
DETAIL C

Prepared by:



Funded by:



Project Title:  
REHABILITATIONS OF AI  
MASHOURE WATER PROJECT

Project Location:  
ALBREYQA DISTRICT —  
ADEN GOV.

Drawing Title:  
MOUNTING FRAME DETAILS

Project Name:  
RAINS OF RESILIENCE 2026

Designed and reviewed by:  
SPRY - WASH Sector

Approved by:  
SPRY - WASH Sector

Status:

**Final Draft**

Project No:

Date

09/06/2026

Paper Size: **A3**

Scale

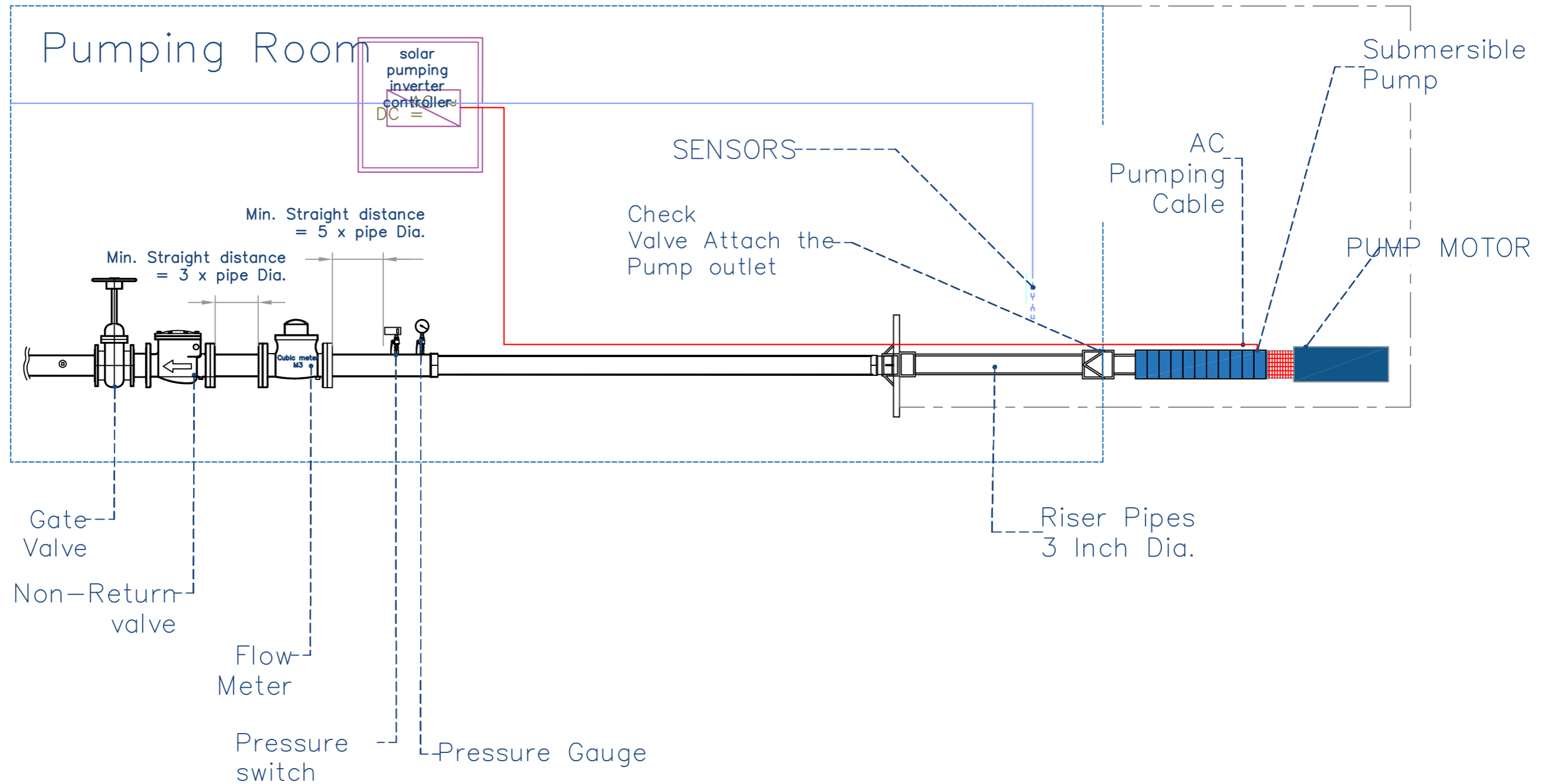
As Shown

North:



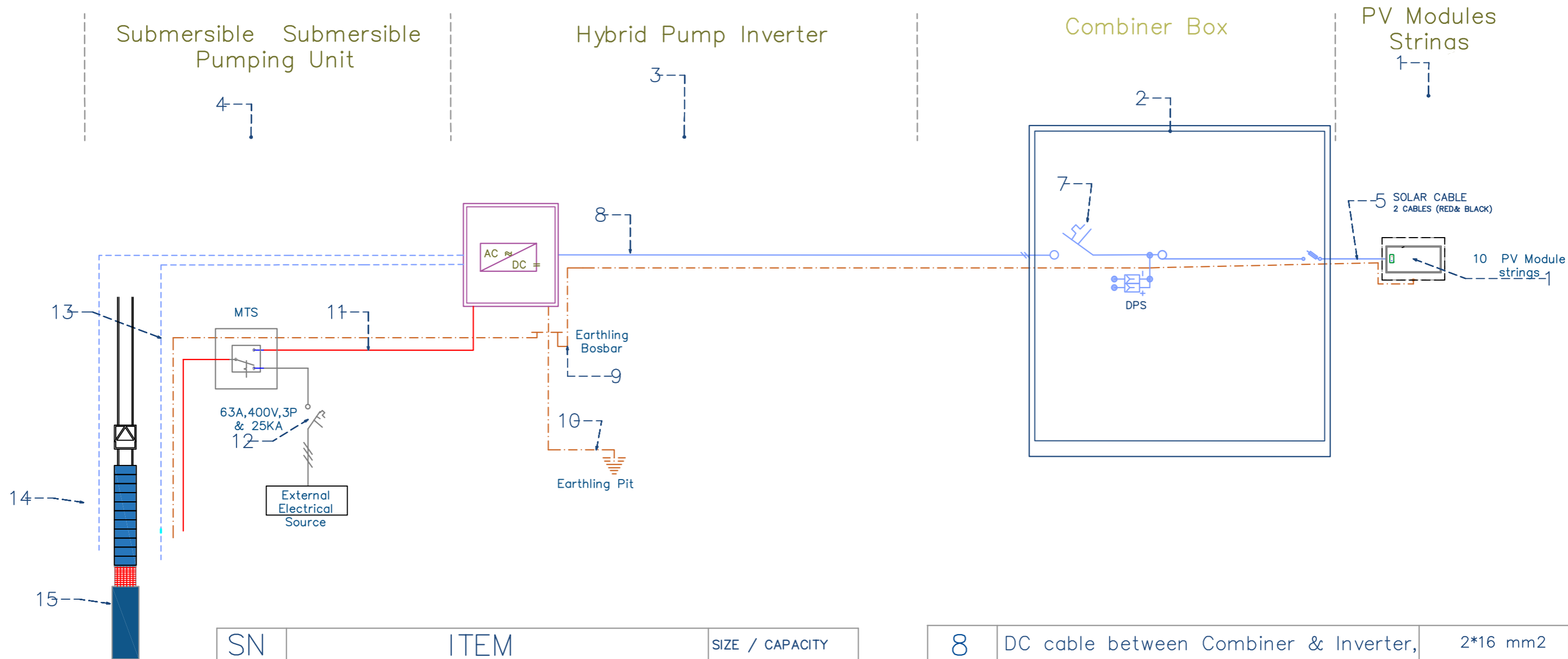
Drawing No:

**A1-09**



Typical Installation of Submersible Pumping Unit

Prepared by: Samaritan's Purse® INTERNATIONAL RELIEF	Funded by: Samaritan's Purse® INTERNATIONAL RELIEF	Project Title:	Drawing Title:	Designed and reviewed by:	Status:	North: N W E S	Drawing No: <b>A1-10</b>
		REHABILITATIONS OF AI MASHOURA WATER PROJECT	SUBMERSIBLE PUMP PLUMBING DETAILS	SPRY - WASH Sector	<b>Final Draft</b>		
Project Location:		Project Name:	Approved by:	Project No:	Paper Size: <b>A3</b>		
ALBREYQA DISTRICT - ADEN GOV.		RAINS OF RESILIENCE 2026	SPRY - WASH Sector	Date: 09/06/2026	Scale: As Shown		



SN	ITEM	SIZE / CAPACITY
1	# of PV Strings and Total Modules	1 strips ≥ 5 kW
2	Protective Circuit Breakers	≥ 32 A
3	Inverter Power, KW	≥ 6 kW
4	Submersible Pump Power , KW	≥ 2 kW
5	DC cable from Arrays to Combiner Box,	≥ 2*10 mm2
6	Earthing Cable between PV modules, ,	10 mm2
7	Combiner DC circuit breaker size	As BOQ

8	DC cable between Combiner & Inverter,	2*16 mm2
9	Earthing Cable from Inverter to the Bus bar	10 mm2
10	Earthing Cable from bus bar to earthing pit	10 mm2
11	Pump AC Cable , mm2	3*10 mm2
12	12 input AC circuit breaker, A	As BOQ
13	Level Sensor Cable , mm2	≥ 1.5 mm2
14	Pressure Switch Cable, mm2	≥ 2*1.5 mm2
15	Submersible Pump Motor , KW	≥ 3 kW

# Submersible Pump Wiring Diagram

Prepared by:



Funded by:



Project Title:  
REHABILITATIONS OF AI MASHOURE WATER PROJECT

Project Location:  
ALBREYQA DISTRICT - ADEN GOV.

Drawing Title:  
SUBMERSIBLE PUMP WIRING DIAGRAM

Project Name:  
RAINS OF RESILIENCE 2026

Designed and reviewed by:  
SPRY - WASH Sector

Approved by:  
SPRY - WASH Sector

Status:

**Final Draft**

Project No:

Date

09/06/2026

Paper Size: **A3**

Scale

As Shown

North:

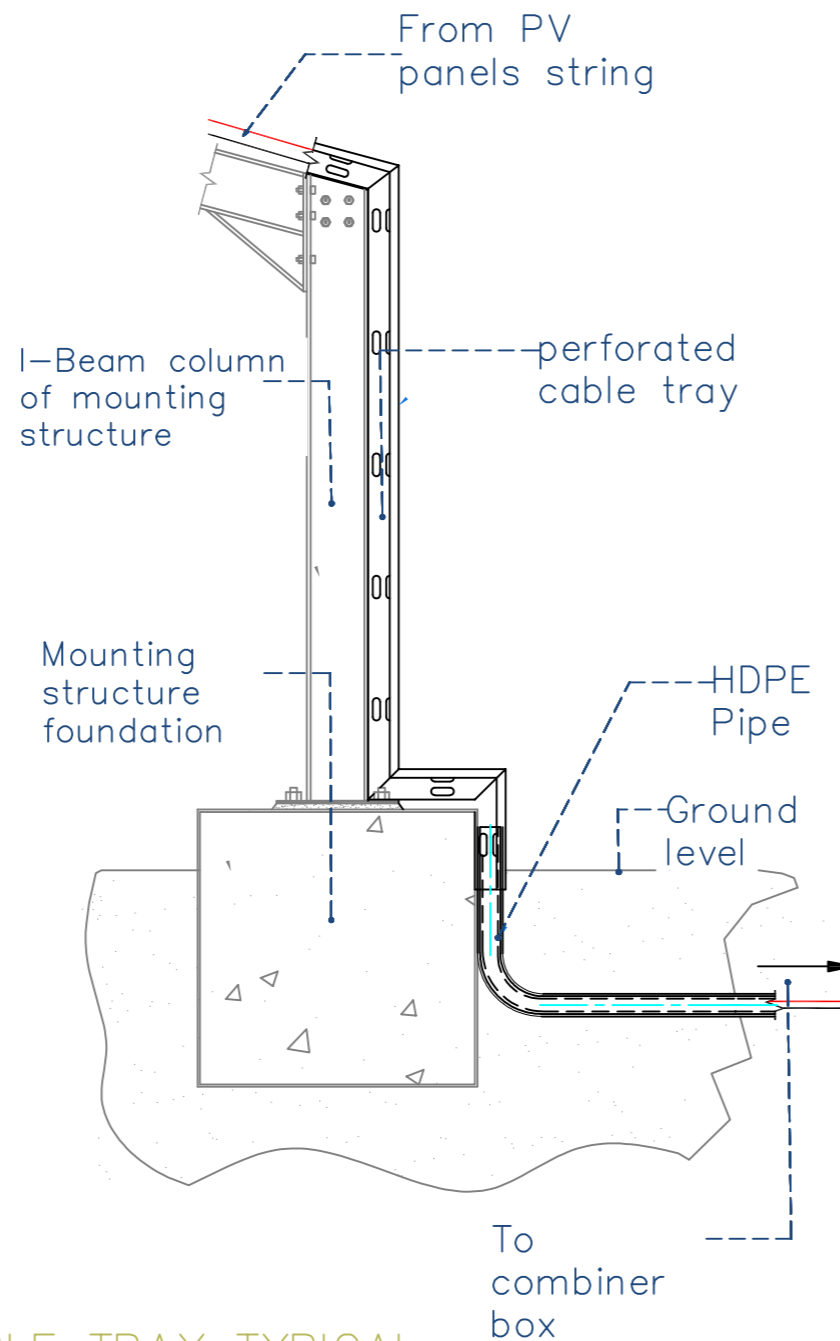


Drawing No:

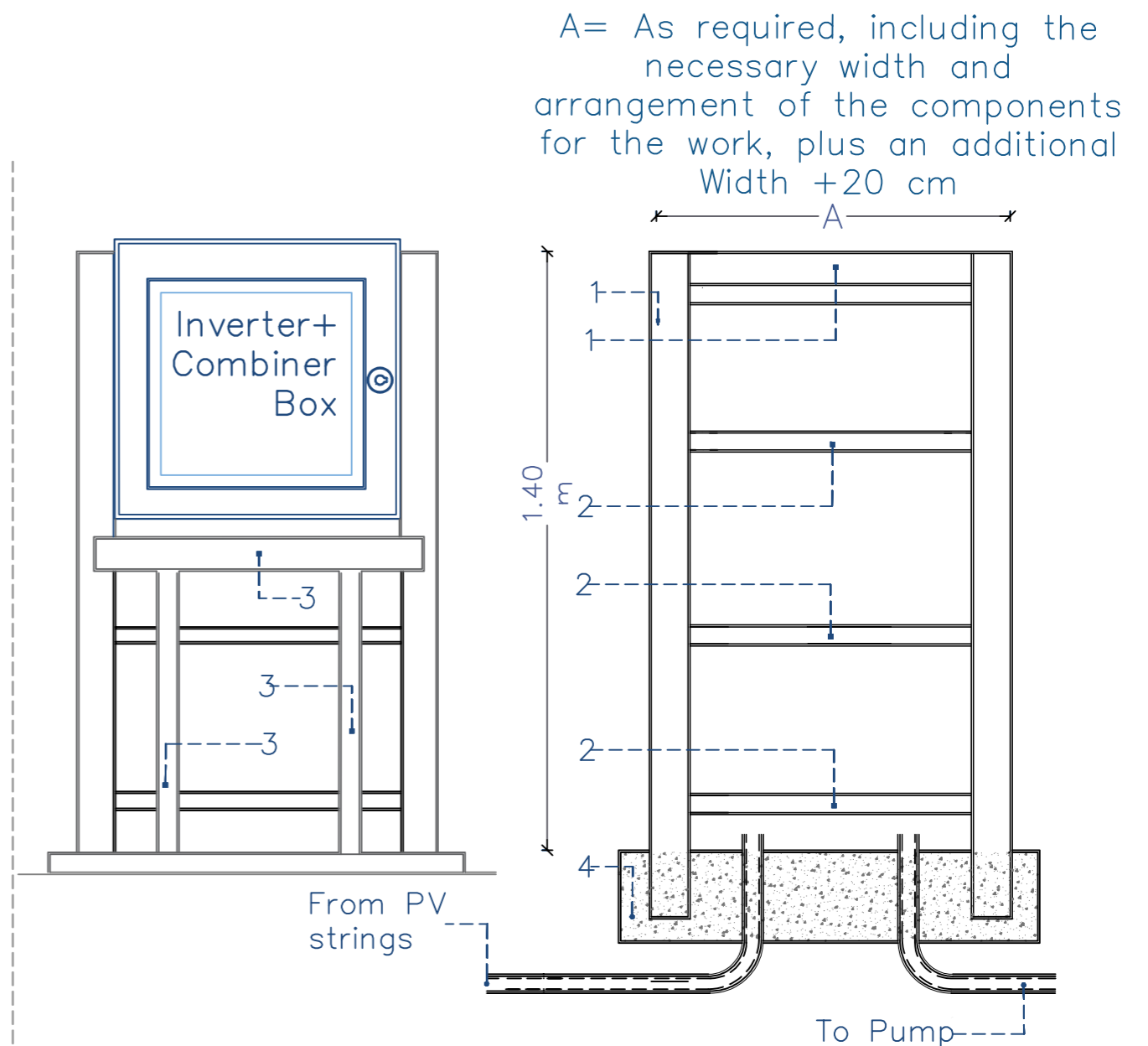
**A1-11**

# Notes:

1. C channel 80x40 x 5mm
2. Angle 50x50x4mm
3. Cable Tray size will be according to the number of cables x 1.5 for future, shall be bolted on the frame
4. Concrete foundation 30cm depth x30cm width.
5. The Frame shall be welded properly and according to welding best practice
6. The frame shall painted by at least two layers of anti corrosion and synthetic enamel paint

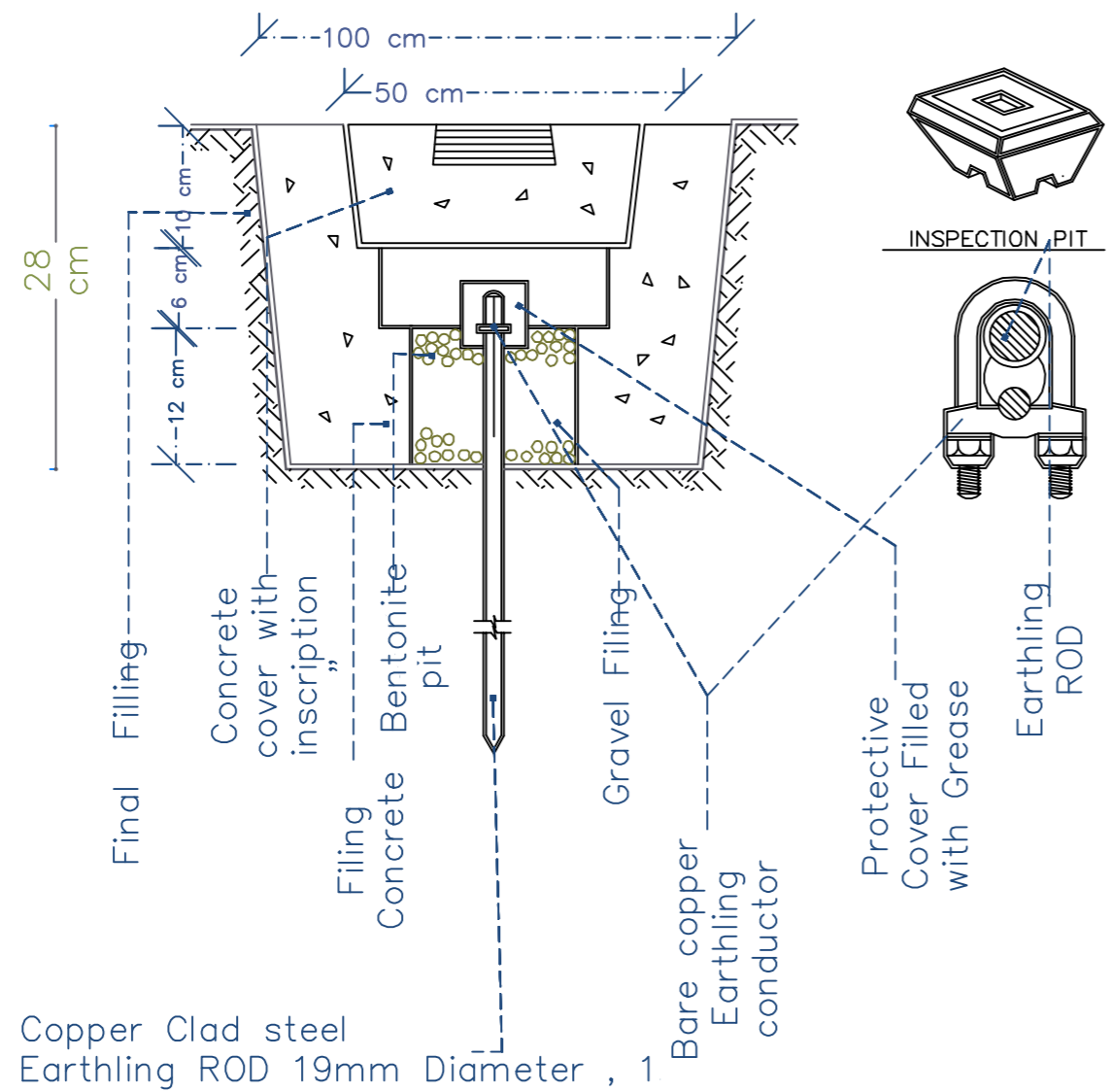


PERFORATED CABLE TRAY TYPICAL INSTALLATION

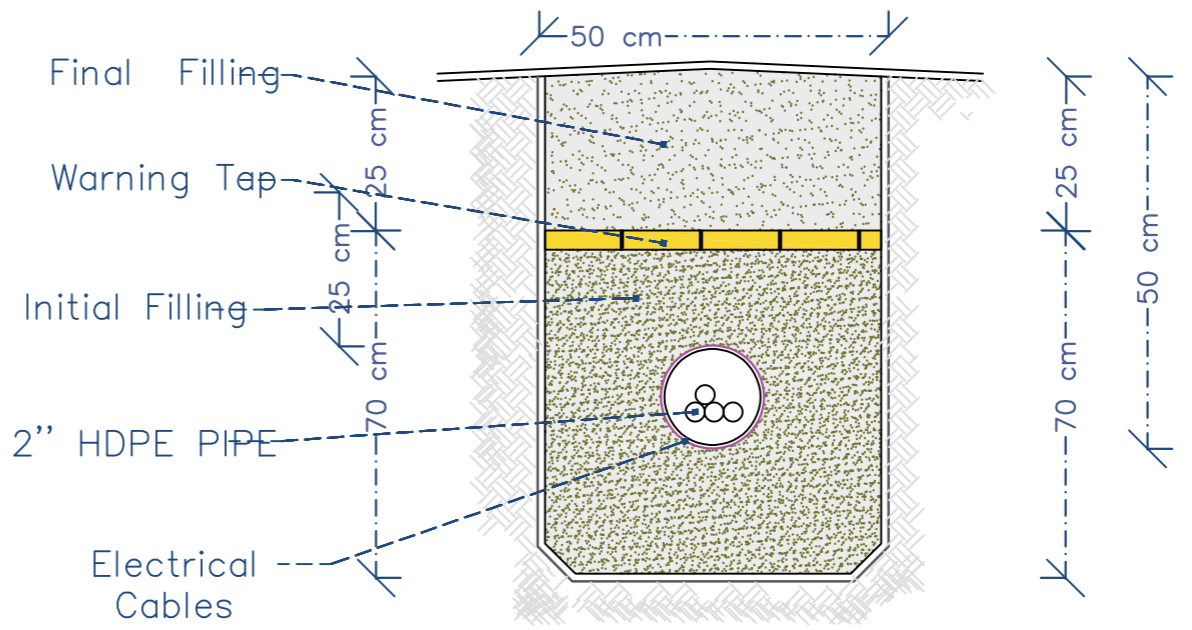
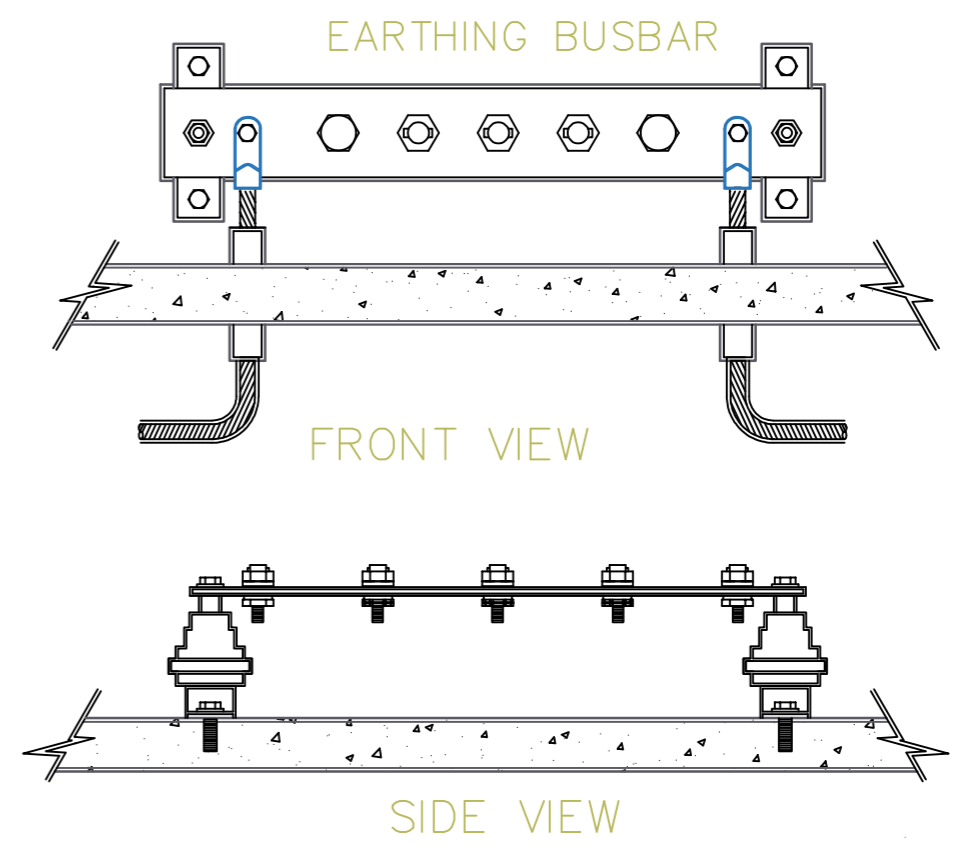


INVERTER FRAME TYPICAL INSTALLATION

Prepared by: Samaritan's Purse® INTERNATIONAL RELIEF	Funded by: Samaritan's Purse® INTERNATIONAL RELIEF	Project Title: REHABILITATIONS OF AI MASHOURE WATER PROJECT	Drawing Title: INVERTER MOUNTING BRACKET AND CABLE TRAY DETAILS	Designed and reviewed by: SPRY - WASH Sector	Status: Final Draft	North: N W E S	Drawing No: A1-12
		Project Location: ALBREYQA DISTRICT - ADEN GOV.	Project Name: RAINS OF RESILIENCE 2026	Approved by: SPRY - WASH Sector	Project No: Date: 09/06/2026	Paper Size: A3 Scale: As Shown	



EARTH PIT



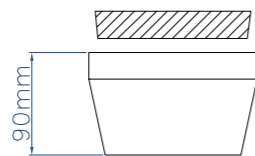
# EARTH PIT DETAILS

EARTH PIT DETAILS

Prepared by: Samaritan's Purse® INTERNATIONAL RELIEF	Funded by: Samaritan's Purse® INTERNATIONAL RELIEF	Project Title:	Drawing Title:	Designed and reviewed by:	Status:	North: 	Drawing No: <b>A1-13</b>
		REHABILITATIONS OF AI MASHOURE WATER PROJECT		SPRY - WASH Sector	<b>Final Draft</b>		
		Project Location:	Project Name:	Approved by:	Project No:	Paper Size: <b>A3</b>	
		ALBREYQA DISTRACT - ADEN GOV.	RAINS OF RESILIENCE 2026	SPRY - WASH Sector	Date: 09/06/2026	Scale: As Shown	

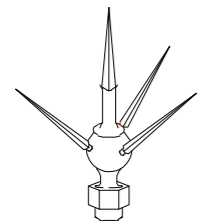
COPPER ROD

OVERALL LENGTH 1200 mm.

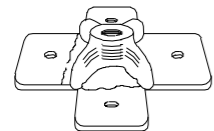


CONCRETE EARTH HOUSING SECTION

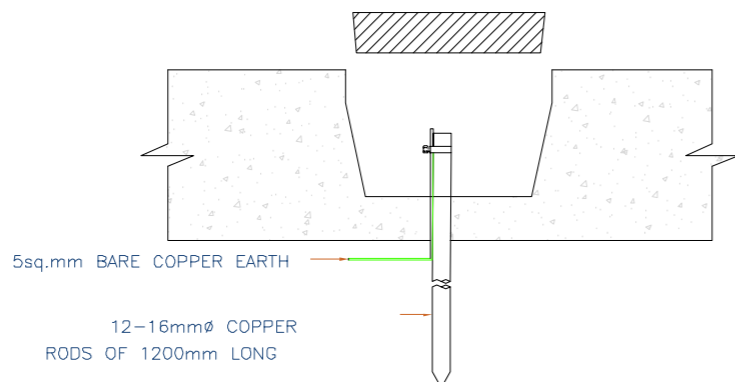
GROUND ROD.  
AIR TERMINAL TIP



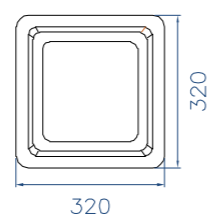
AIR TERMINAL



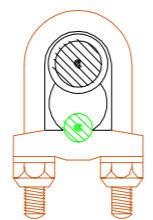
AIR TERMINAL SADDL



ELEVATION

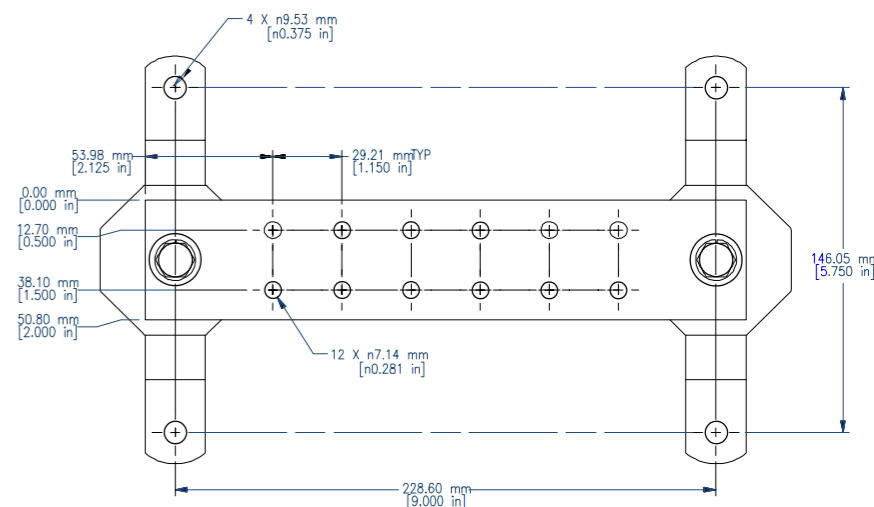
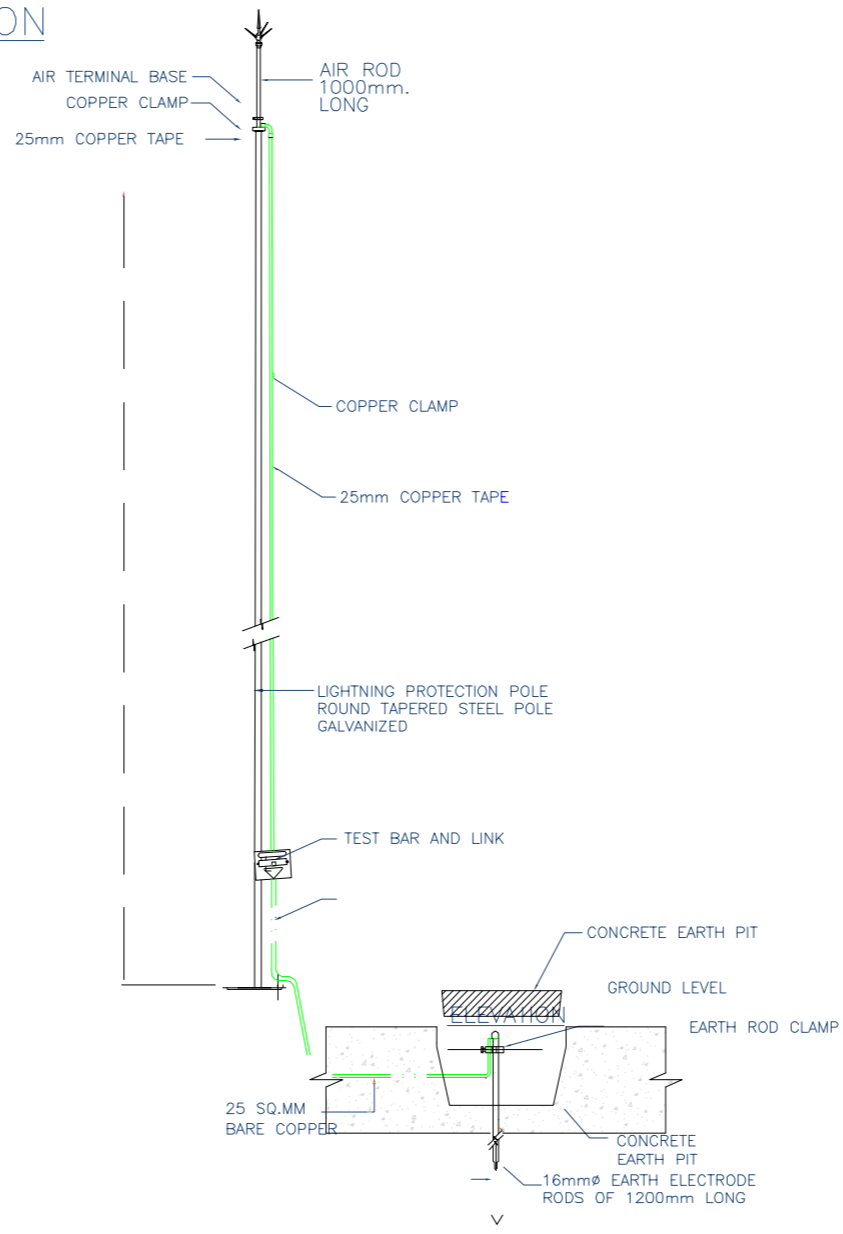


CONCRETE EARTH HOUSING PLAN

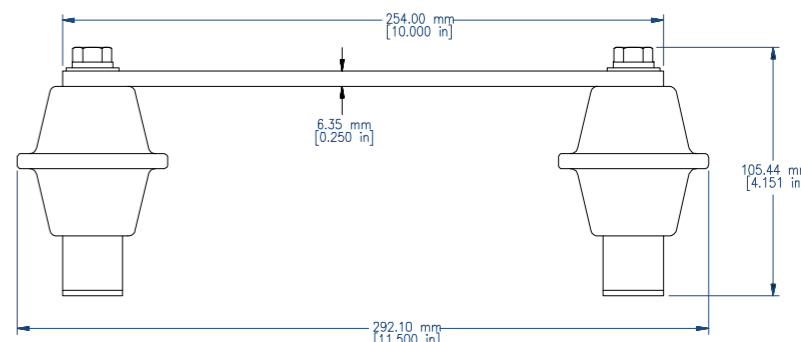


CLAMP

LIGHTNING PROTECTION SYSTEM



ASSEMBLY - TOP VIEW



ASSEMBLY - SIDE VIEW  
EARTHING BUSBAR

Prepared by:

Funded by:

Project Title:  
REHABILITATIONS OF AI MASHOURE WATER PROJECT

Project Location:  
ALBREYQA DISTRACT - ADEN GOV.

Drawing Title:  
LIGHTNING PROTECTION SYSTEM

Project Name:  
RAINS OF RESILIENCE 2026

Designed and reviewed by:  
SPRY - WASH Sector

Approved by:  
SPRY - WASH Sector

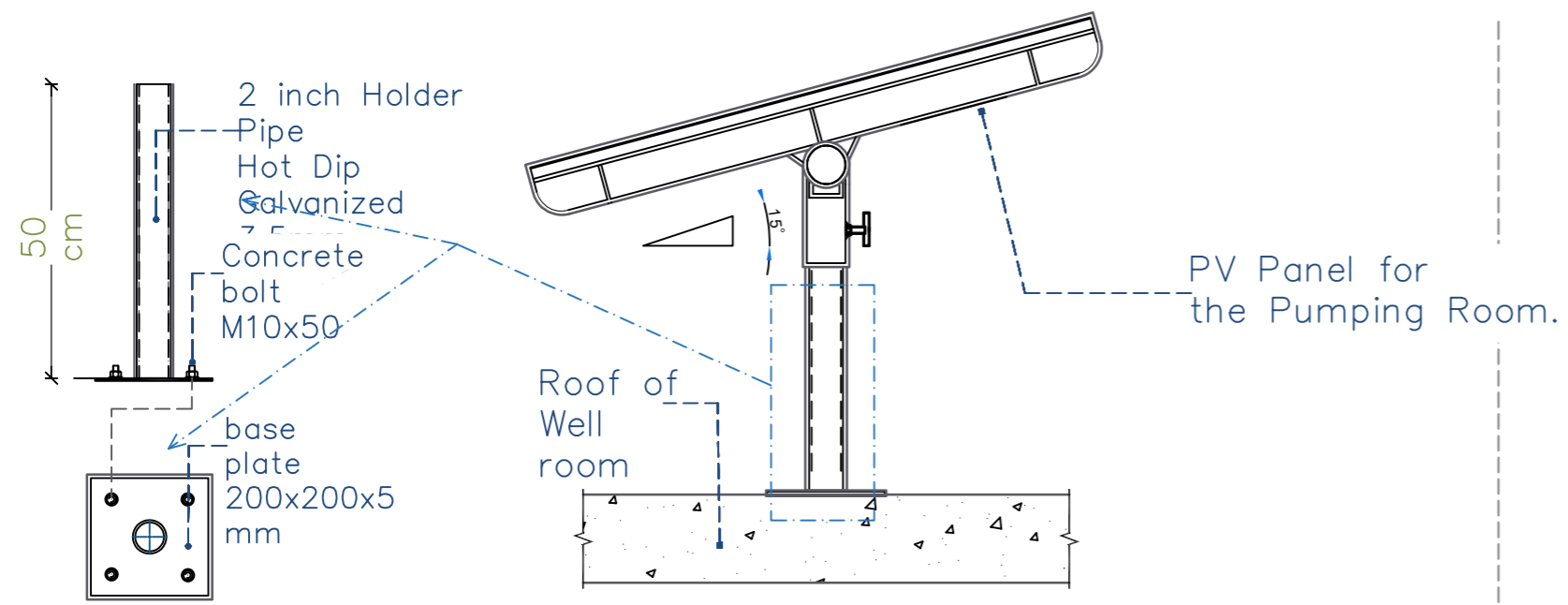
Status:  
Final Draft

Project No:  
Date: 09/06/2026

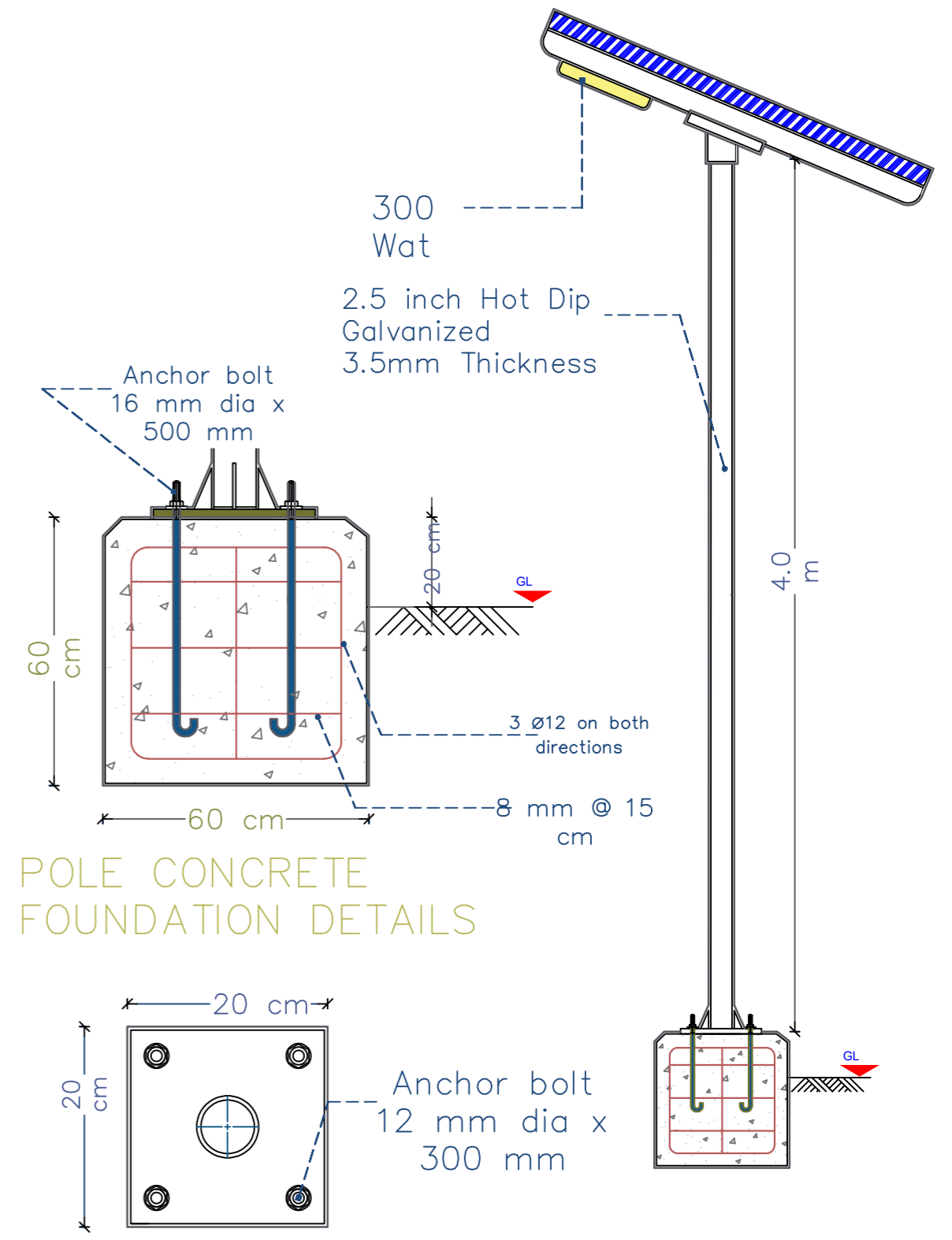
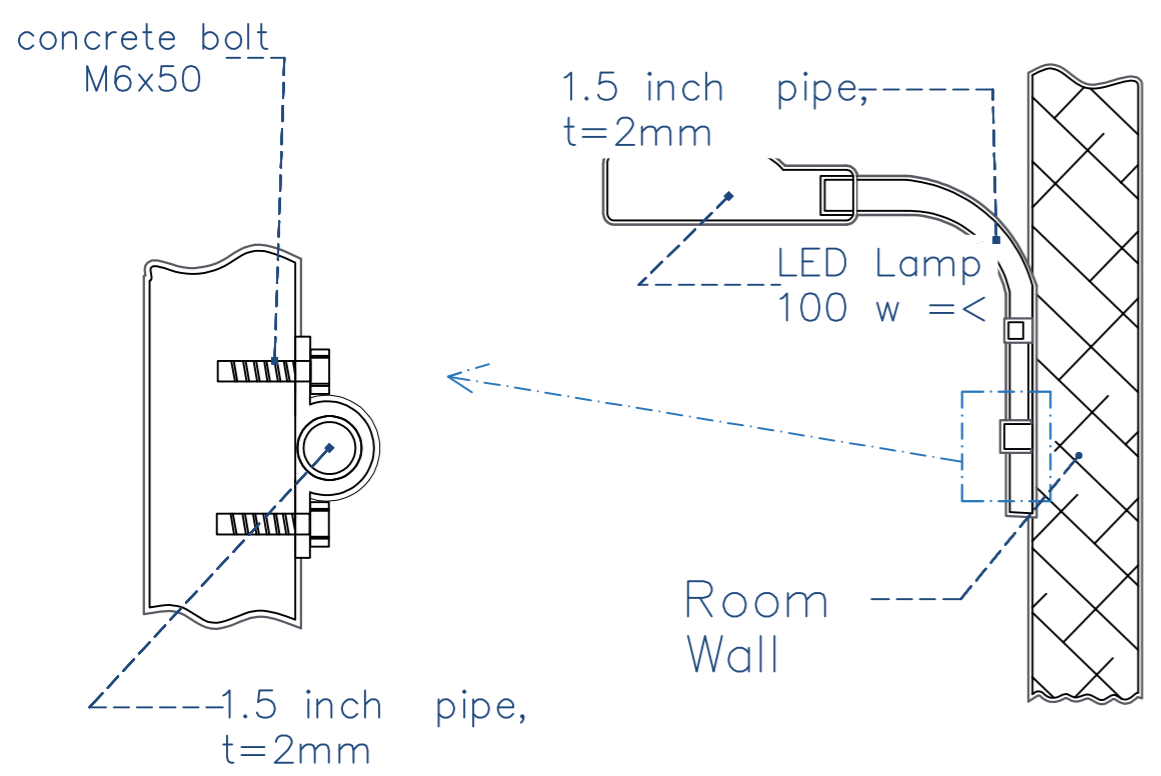
Paper Size: A3  
Scale: As Shown

North:

Drawing No:  
A1-14



PV PANEL OF ROOM LIGHTING  
TYPICAL INSTALLATION

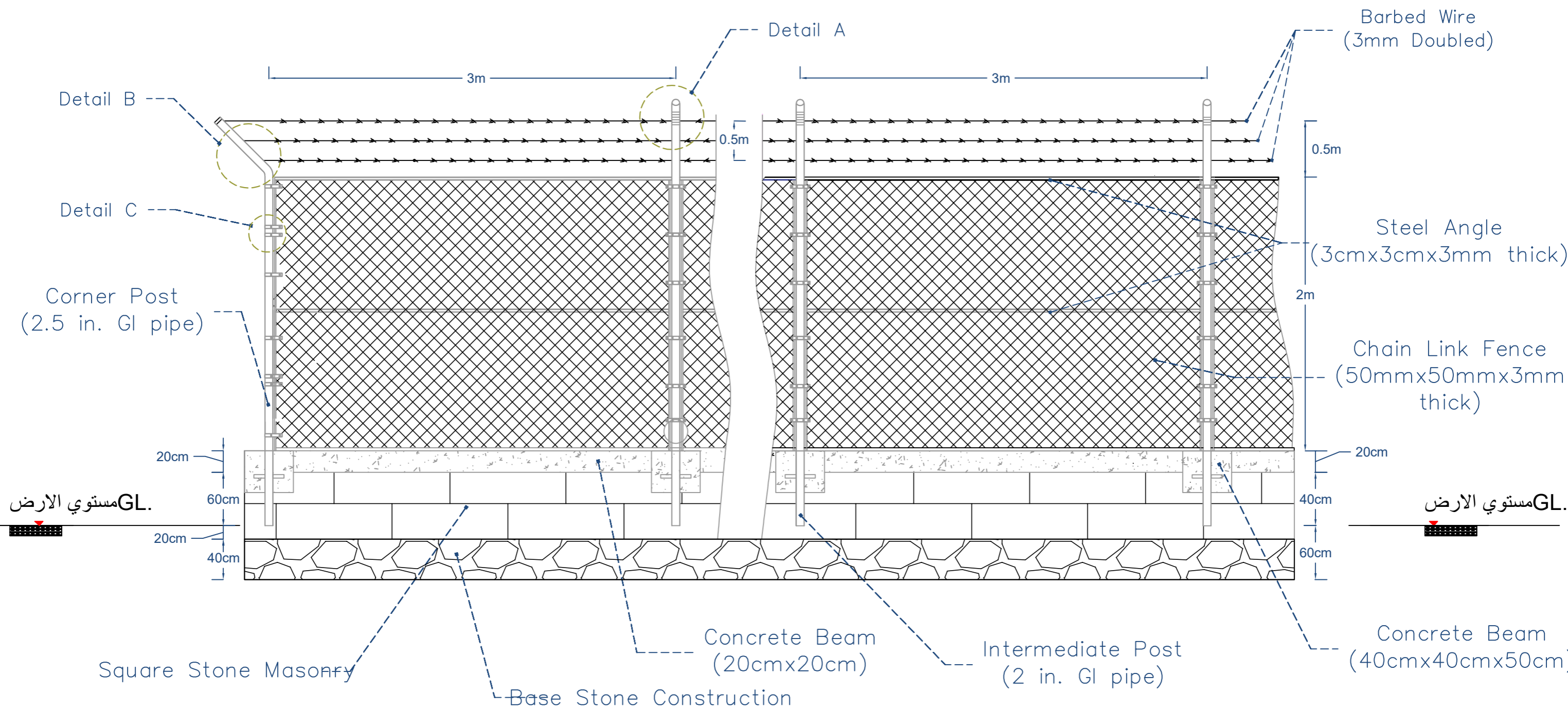





POLE CONCRETE FOUNDATION DETAILS

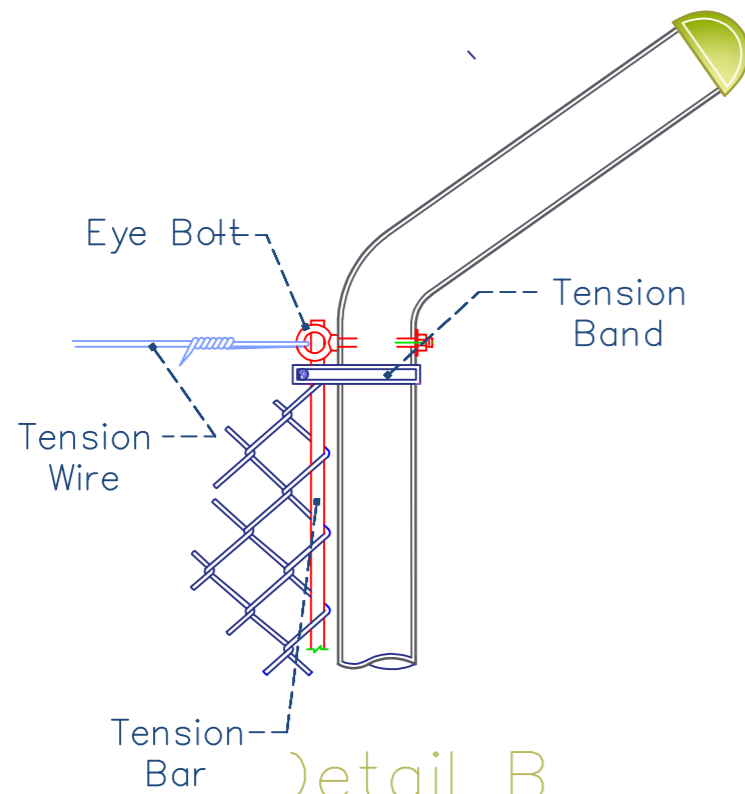
BASE PLATE DETAIL

DETAIL - B

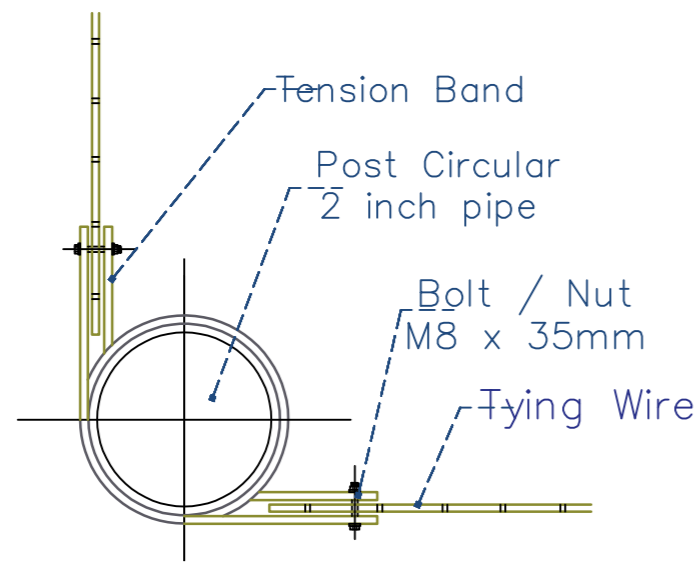
Prepared by: Samaritan's Purse® INTERNATIONAL RELIEF	Funded by: Samaritan's Purse® INTERNATIONAL RELIEF	Project Title: REHABILITATIONS OF AL MASHOURE WATER PROJECT	Drawing Title: SITE LIGHTING DETAILS	Designed and reviewed by: SPRY - WASH Sector	Status: Final Draft	North: N W E S	Drawing No: A1-15
		Project Location: ALBREYQA DISTRACT - ADEN GOV.	Project Name: RAINS OF RESILIENCE 2026	Approved by: SPRY - WASH Sector	Project No: Date: 09/06/2026	Paper Size: A3 Scale: As Shown	



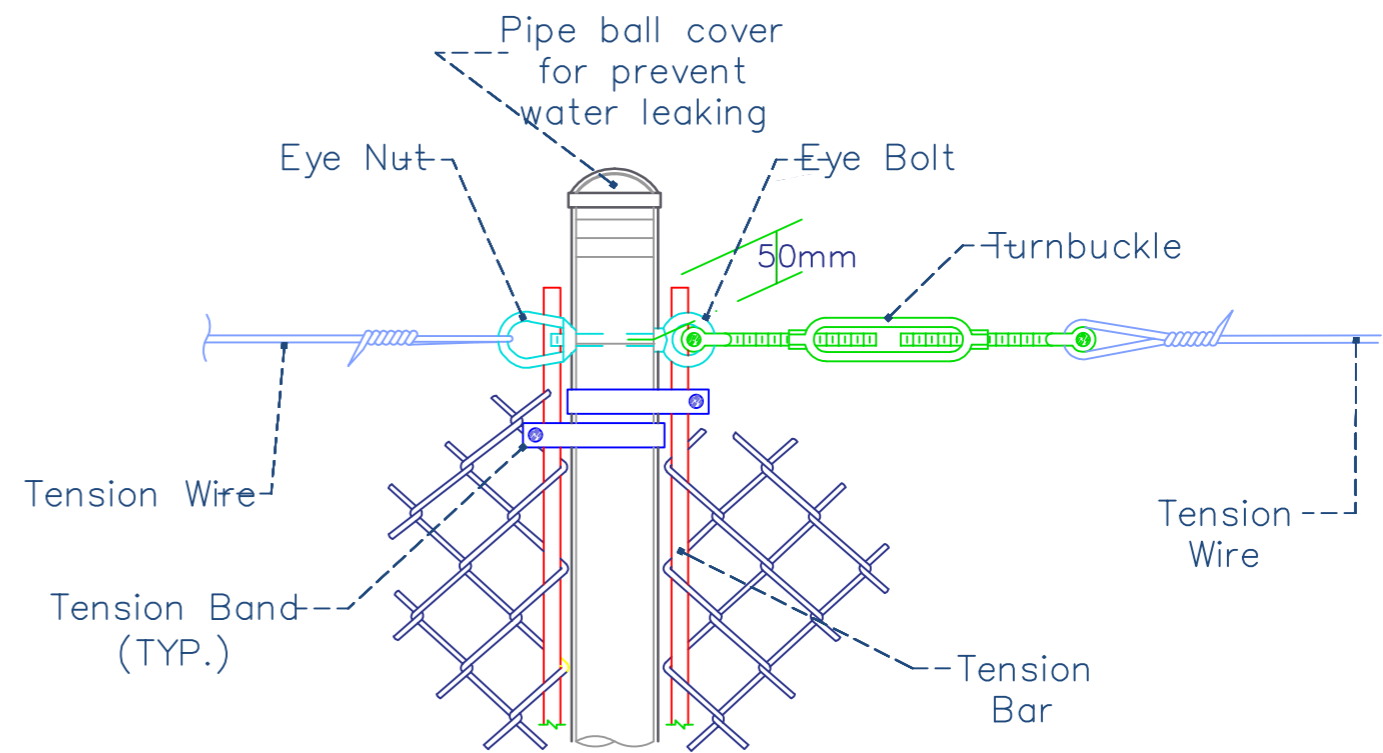
Prepared by: 	Funded by: 	Project Title: REHABILITATIONS OF AL MASHOURE WATER PROJECT	Drawing Title: PROTECTION FENCE	Designed and reviewed by: SPRY - WASH Sector	Status: <b>Final Draft</b>	North: 	Drawing No: <b>A1-16</b>
		Project Location: ALBREYQA DISTRICT - ADEN GOV.	Project Name: RAINS OF RESILIENCE 2026	Approved by: SPRY - WASH Sector	Project No: Date: 09/06/2026		



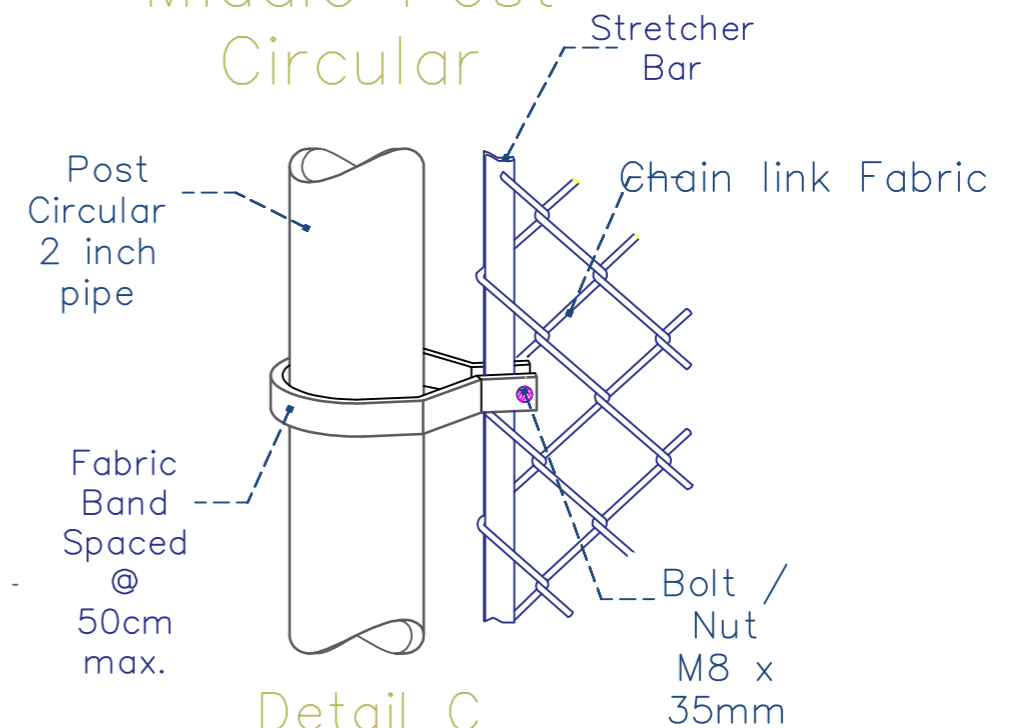
Detail B  
Corner Post



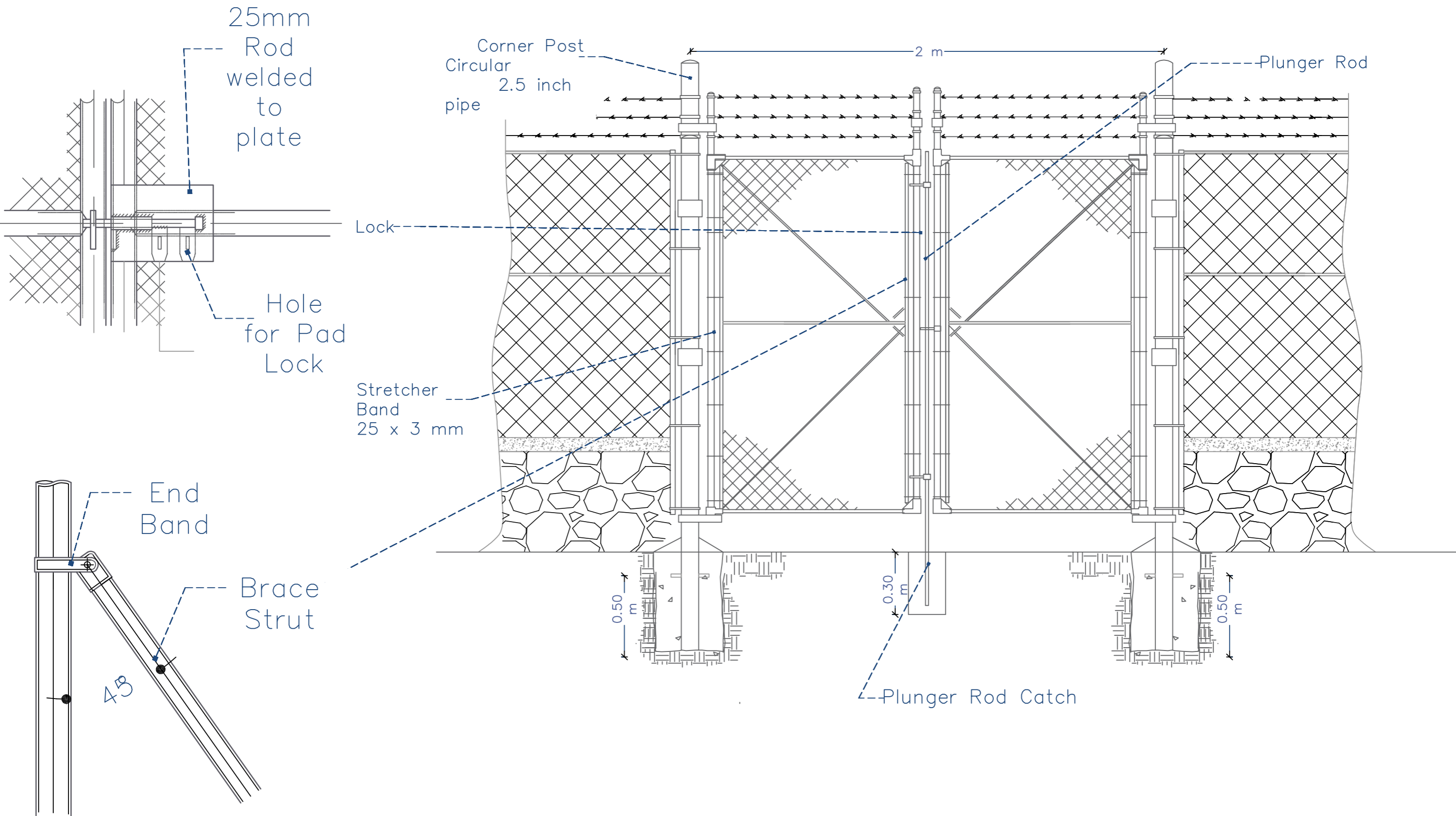
Plan view  
Corner Post pip tying



Detail A  
Middle Post  
Circular



Detail C  
Stretcher Bar



Prepared by: 	Funded by: 	Project Title: REHABILITATIONS OF AL MASHOURE WATER PROJECT	Drawing Title: MAIN ENTRANCE GATE	Designed and reviewed by: SPRY - WASH Sector	Status: <b>Final Draft</b>	North: 	Drawing No: <b>A1-18</b>
		Project Location: ALBREYQA DISTRICT - ADEN GOV.	Project Name: RAINS OF RESILIENCE 2026	Approved by: SPRY - WASH Sector	Project No: Date: 09/06/2026	Paper Size: <b>A3</b> Scale: <b>As Shown</b>	



- خزانات المياه
- غرفة محابس
- إعادة تأهيل نقطة مياه
- نقطة مياه جديدة
- بئر مشهور (المخنق)

- Details for Lines**
- خط ضخ موجود 4 هنش
  - خط إسالة موجود 4 هنش
  - خط إسالة موجود 3 هنش
  - Existing pumping line 4 Inch
  - Existing Distribution line 4 Inch
  - Existing Distribution line 3 Inch

- 3 هنش خط إسالة جديد
- 2 هنش خط إسالة جديد
- 1.5 هنش خط إسالة جديد
- 1 هنش خط إسالة جديد
- 3 Inch New water network pipes
- 2 Inch New water network pipes
- 1.5 Inch New water network pipes
- 1 Inch New water network pipes

Prepared by:	Funded by:	Project Title:	Drawing Title:	Designed and reviewed by:	Status:	North:	Drawing No:
		REHABILITATIONS OF AI MASHOURE WATER PROJECT	<b>Water Network Plan</b>	SPRY - WASH Sector	<b>Final Draft</b>		<b>A1-19</b>
		Project Location:	Project Name:	Approved by:	Project No:		
		ALBREYQA DISTRACT – ADEN GOV.	RAINS OF RESILIENCE 2026	SPRY - WASH Sector	Date: 09/06/2026	Scale: As Shown	



- Legend**
- Collection Tank
  - Const. WP1
  - Old Pumping Line 4 Inch
  - Pumping Line 4 PE
  - Pumping New Line 3inch
  - R5
  - Rehab.
  - Sub-Village
  - The Well
  - Tower Tank

**Details for Lines**

	خزانات المياه		خط ضخ موجود 4 هنش		Existing pumping line 4 Inch		3 هنش خط إسالة جديد		3 Inch New water network pipes
	غرفة محابس		خط إسالة موجود 4 هنش		Existing Distribution line 4 Inch		2 هنش خط إسالة جديد		2 Inch New water network pipes
	إعادة تأهيل نقطة مياه		خط إسالة موجود 3 هنش		Existing Distribution line 3 Inch		1.5 هنش خط إسالة جديد		1.5 Inch New water network pipes
	نقطة مياه جديدة		خط إسالة موجود		Existing Distribution line 1.5 Inch		1 هنش خط إسالة جديد		1 Inch New water network pipes
	بئر مشهور (المخفق)								

Prepared by:  
  
 Samaritan's Purse  
 INTERNATIONAL RELIEF

Funded by:  
  
 Samaritan's Purse  
 INTERNATIONAL RELIEF

Project Title:  
 REHABILITATIONS OF AL MASHOURE WATER PROJECT  
 Project Location:  
 ALBREYQA DISTRACT – ADEN GOV.

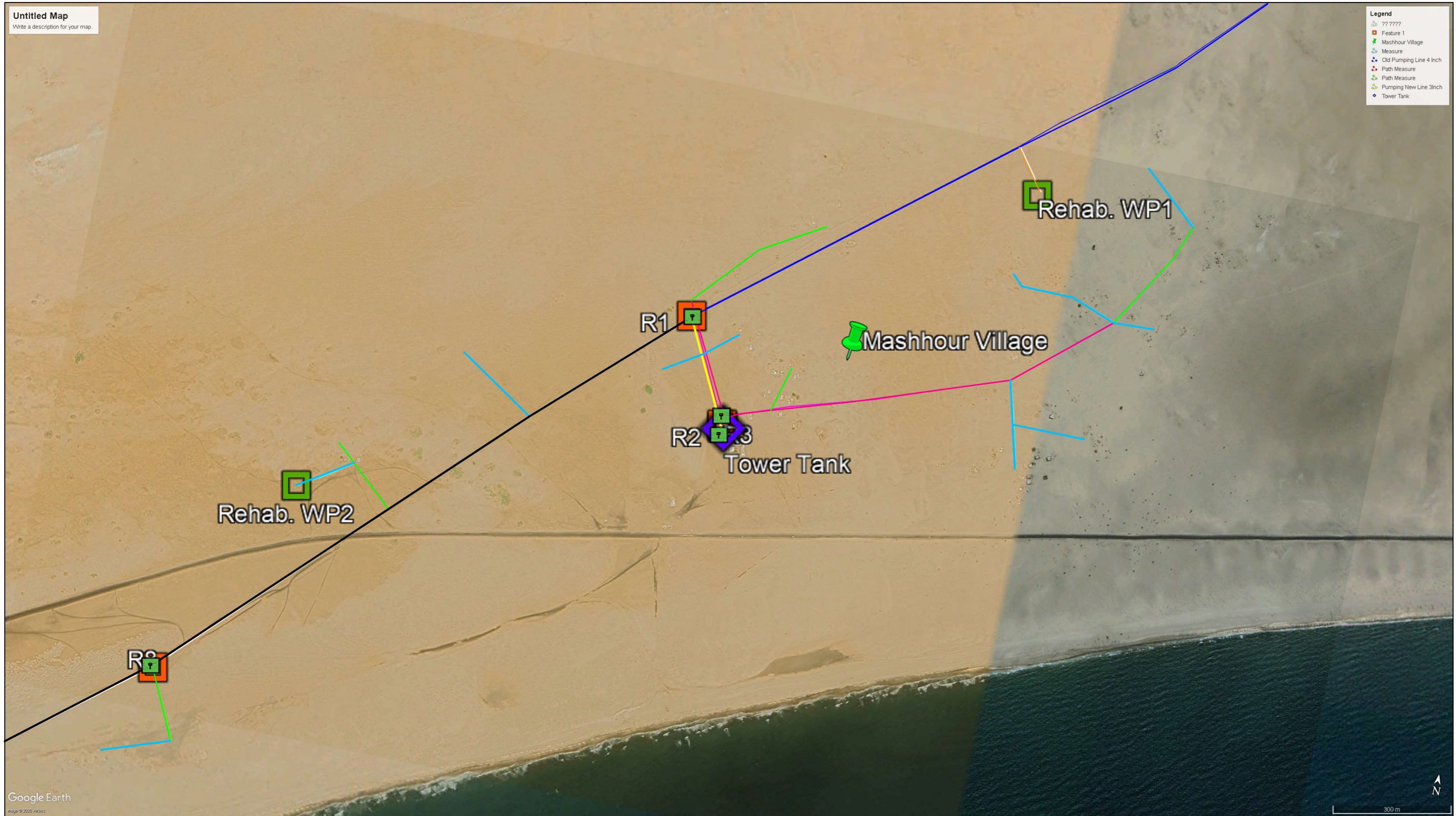
Drawing Title:  
**Water Network Plan Zone 1**  
 Project Name:  
 RAINS OF RESILIENCE 2026

Designed and reviewed by:  
 SPRY - WASH Sector  
 Approved by:  
 SPRY - WASH Sector

Status:  
**Final Draft**  
 Project No:  
 Date: 09/06/2026  
 Paper Size: **A3**  
 Scale: As Shown

North:

Drawing No:  
**A1-20**



Google Earth

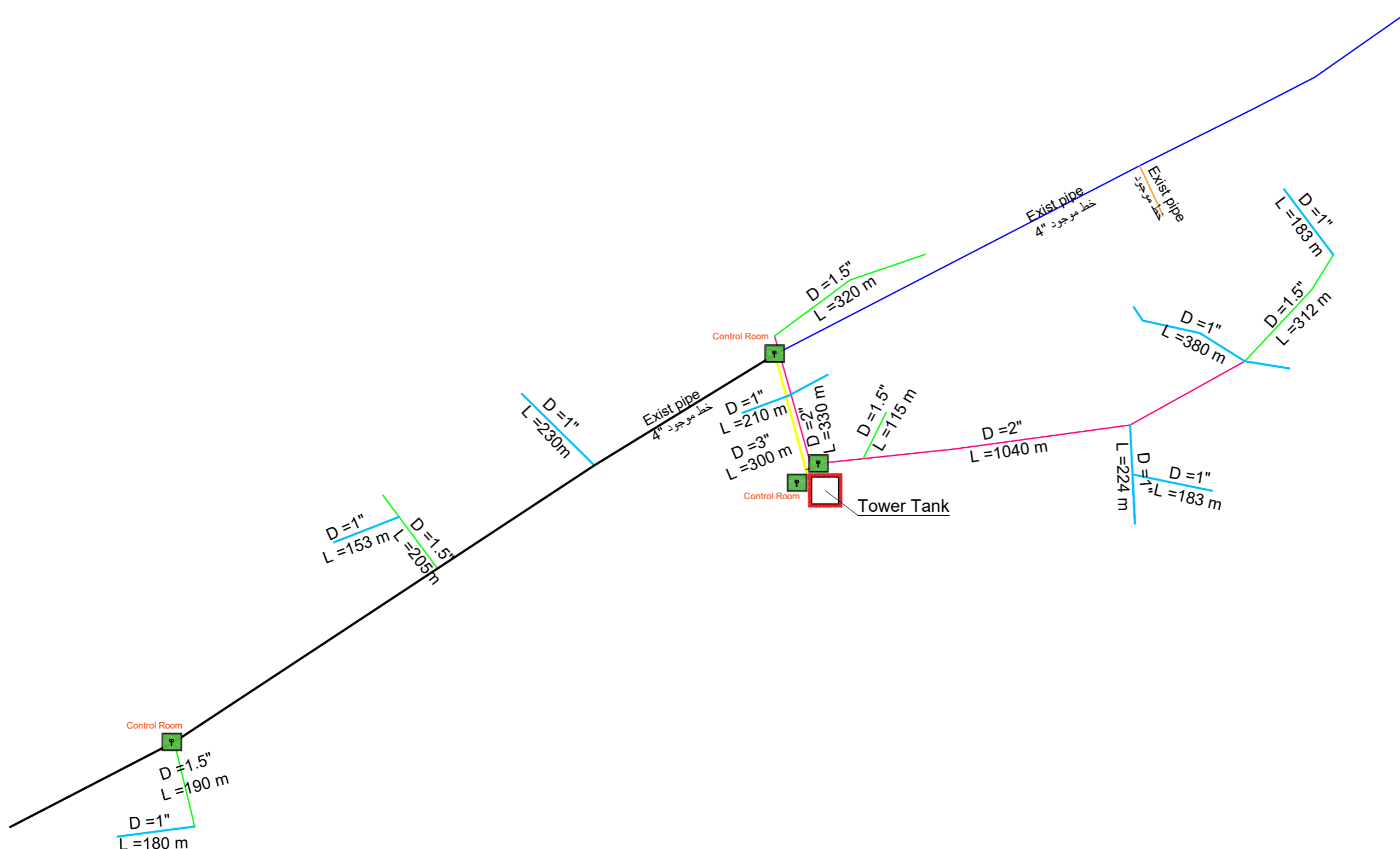
300 m

- خزانات المياه
- غرفة محابس
- إعادة تأهيل نقطة مياه
- نقطة مياه جديدة
- بئر مشهور (المخنق)

- Details for Lines**
- خط ضخ موجود 4 هنش Existing pumping line 4 Inch
  - خط إسالة موجود 4 هنش Existing Distribution line 4 Inch
  - خط إسالة موجود 3 هنش Existing Distribution line 3 Inch
  - خط إسالة موجود Existing Distribution line 1.5 Inch

- 3 هنش خط إسالة جديد 3 Inch New water network pipes
- 2 هنش خط إسالة جديد 2 Inch New water network pipes
- 1.5 هنش خط إسالة جديد 1.5 Inch New water network pipes
- 1 هنش خط إسالة جديد 1 Inch New water network pipes

Prepared by:	Funded by:	Project Title:	Drawing Title:	Designed and reviewed by:	Status:	North:	Drawing No:
 Samaritan's Purse <small>INTERNATIONAL RELIEF</small>	 Samaritan's Purse <small>INTERNATIONAL RELIEF</small>	<small>REHABILITATIONS OF AL MASHOURE WATER PROJECT</small> <b>Water Network Plan Zone 2</b>	<b>Water Network Plan Zone 2</b>	SPRY - WASH Sector	<b>Final Draft</b>		<b>A1-21</b>
		Project Location: <small>ALBREYQA DISTRACT - ADEN GOV.</small>	Project Name: <small>RAINS OF RESILIENCE 2026</small>	Approved by: SPRY - WASH Sector	Project No: Paper Size: <b>A3</b>	Date: <small>09/06/2026</small> Scale: <small>As Shown</small>	



**Details for Lines**

خط ضخ موجود 4 هنش		Existing pumping line 4 Inch	هنش 3 خط إسالة جديد		3 Inch New water network pipes
خط إسالة موجود 4 هنش		Existing Distribution line 4 Inch	هنش 2 خط إسالة جديد		2 Inch New water network pipes
خط إسالة موجود 3 هنش		Existing Distribution line 3 Inch	هنش 1.5 خط إسالة جديد		1.5 Inch New water network pipes
خط إسالة موجود		Existing Distribution line 1.5 Inch	هنش 1 خط إسالة جديد		1 Inch New water network pipes

Prepared by:  
  
 Samaritan's Purse  
 INTERNATIONAL RELIEF

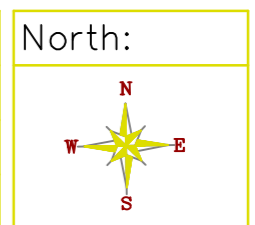
Funded by:  
  
 Samaritan's Purse  
 INTERNATIONAL RELIEF

Project Title:  
 REHABILITATIONS OF AL MASHOURE WATER PROJECT  
 Project Location:  
 ALBREYQA DISTRICT - ADEN GOV.

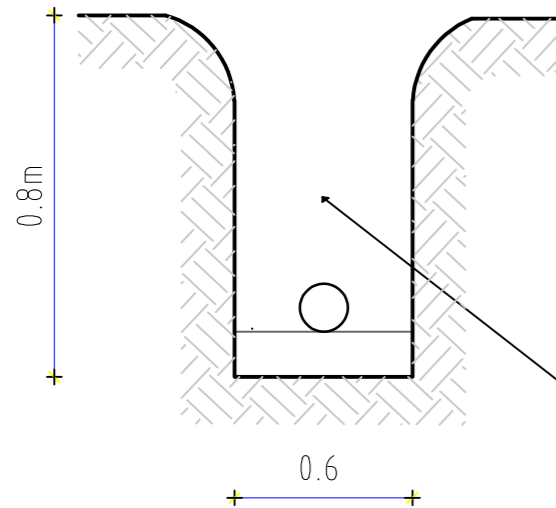
Drawing Title:  
**Water Network Plan zone 2**  
 Project Name:  
 RAINS OF RESILIENCE 2026

Designed and reviewed by:  
 SPRY - WASH Sector  
 Approved by:  
 SPRY - WASH Sector

Status:  
**Final Draft**  
 Project No:  
 Date: 09/06/2026  
 Paper Size: **A3**  
 Scale: As Shown

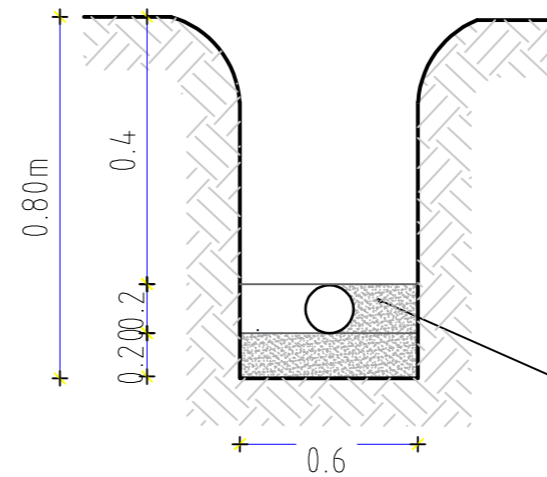


Drawing No:  
**A1-22**

**Step 01**

Drilling is carried out according to the specified dimensions, with a depth of no less than 1.2m and a width suitable for installing pipes of no less than 50cm.  
 يتم الحفر بحسب الأبعاد المحدد عمق لا يقل عن 1,2 م والعرض المناسب لتركيب المواسير لا يقل عن 60 سم.

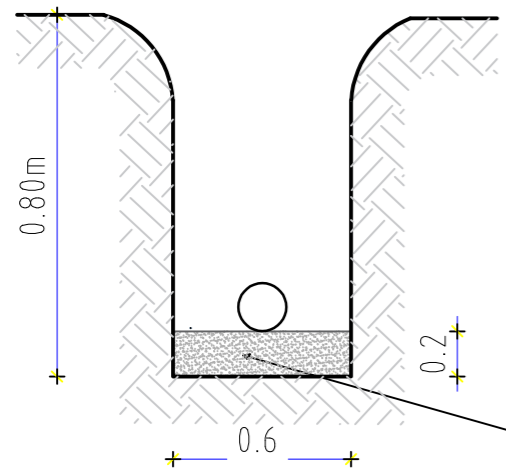
**Excavation details**  
 تفاصيل الحفر

**Step 03**

The pipes are placed after connecting them, testing the pumping into them, and checking that no water is leaking from them. Then backfilling with sand or soft soil is completed around and over the pipe with a thickness of no less than 20 cm.

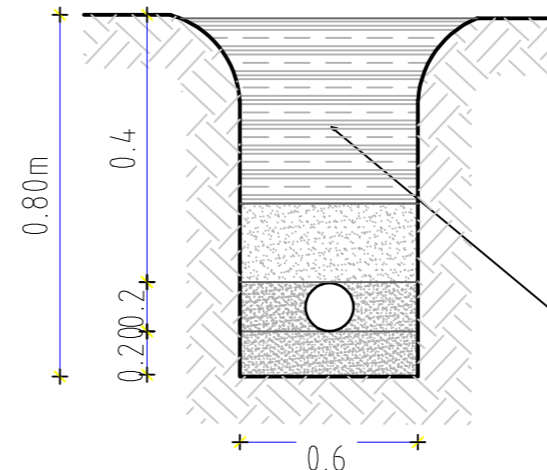
يتم وضع الانابيب بعد توصيلها وتجربة الضخ فيها وفحص عدم تسريب مياه منها ومن ثم يتم اكمال الردم بالرمل او التربة الناعم حول و فوق الانبوب بسماكة لا تقل عن 20 سم.

**Details Backfilling Around the Pipe**  
 تفاصيل الردم حول الانبوب

**Step 02**

Sand or soft soil is placed under the pipe with a thickness of no less than 15 cm, up to the middle of the pipe, and compact it with your foot.  
 يتم وضع الرمل او التراب الناعم تحت الانبوب بسماكة لا تقل عن 15 سم حتي منتصف الانبوب والدك عليه بالقدم.

**Details for start Installation**  
 تفاصيل بداية التركيب

**Step 04**

Backfilling with soft soil over the pipes 30 cm with tamping, and then the resulting excavation is backfilled in layers with tamping every 25 cm to prevent the backfill from collapsing in the future.

يتم الردم بتربة ناعمة فوق الانابيب ب 30 سم مع الدك وبعدها يتم الردم من ناتج الحفر علا طبقات مع الدك كل 25 سم لمنع هبوط الردم في مستقبل

**Details of completing the backfill with tamping**  
 تفاصيل اكمال الردم مع الدك

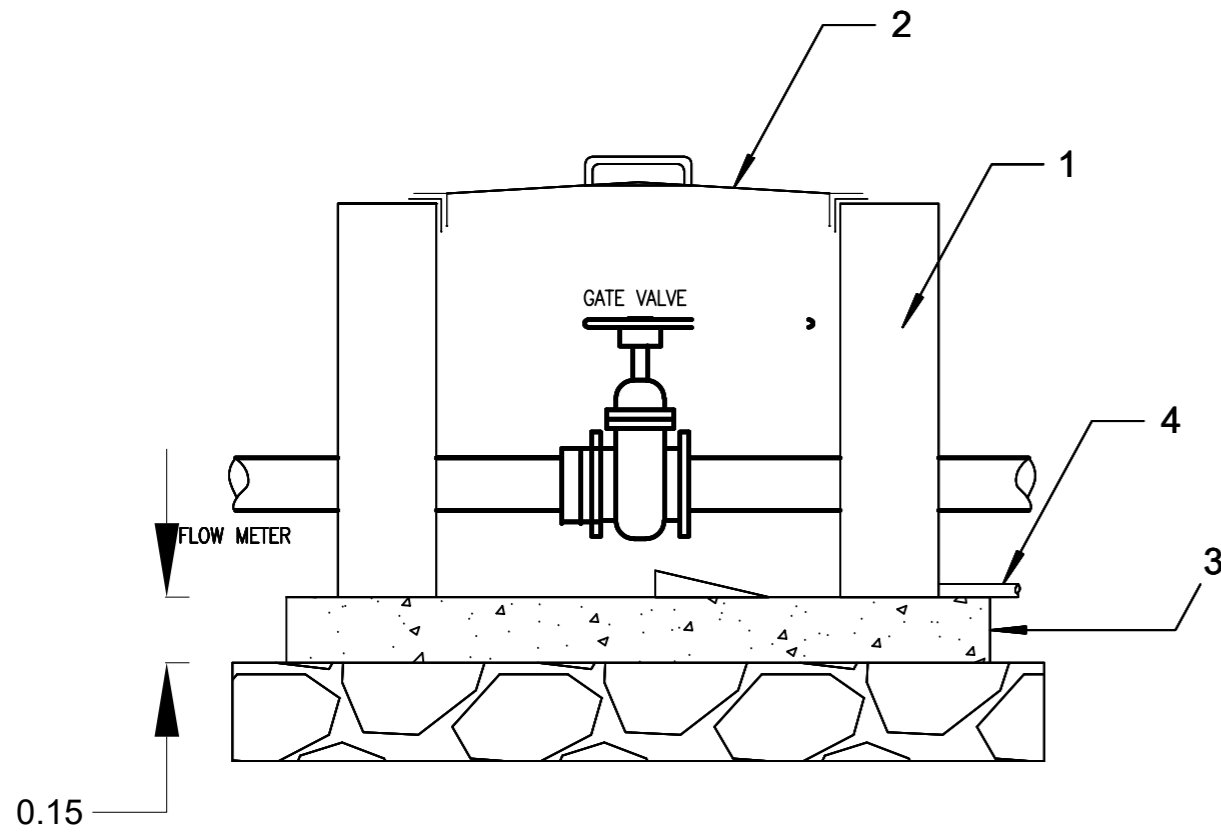
**Details of excavation, backfilling, water network and pumping line installation**  
 تفاصيل الحفر والرمد وتركيب شبكة التوزيع وخط الضخ

Prepared by: Samaritan's Purse® INTERNATIONAL RELIEF	Funded by: Samaritan's Purse® INTERNATIONAL RELIEF	Project Title: REHABILITATIONS OF AL MASHOURE WATER PROJECT	Drawing Title: EXCAVATION, BACKFILL, WATER NETWORK DETAILS	Designed and reviewed by: SPRY - WASH Sector	Status: Final Draft	North: N W E S	Drawing No: A1-23
		Project Location: ALBREYQA DISTRICT - ADEN GOV.	Project Name: RAINS OF RESILIENCE 2026	Approved by: SPRY - WASH Sector	Project No: Date: 09/06/2026	Paper Size: A3	
					Date: 09/06/2026	Scale: As Shown	

**Notes :**

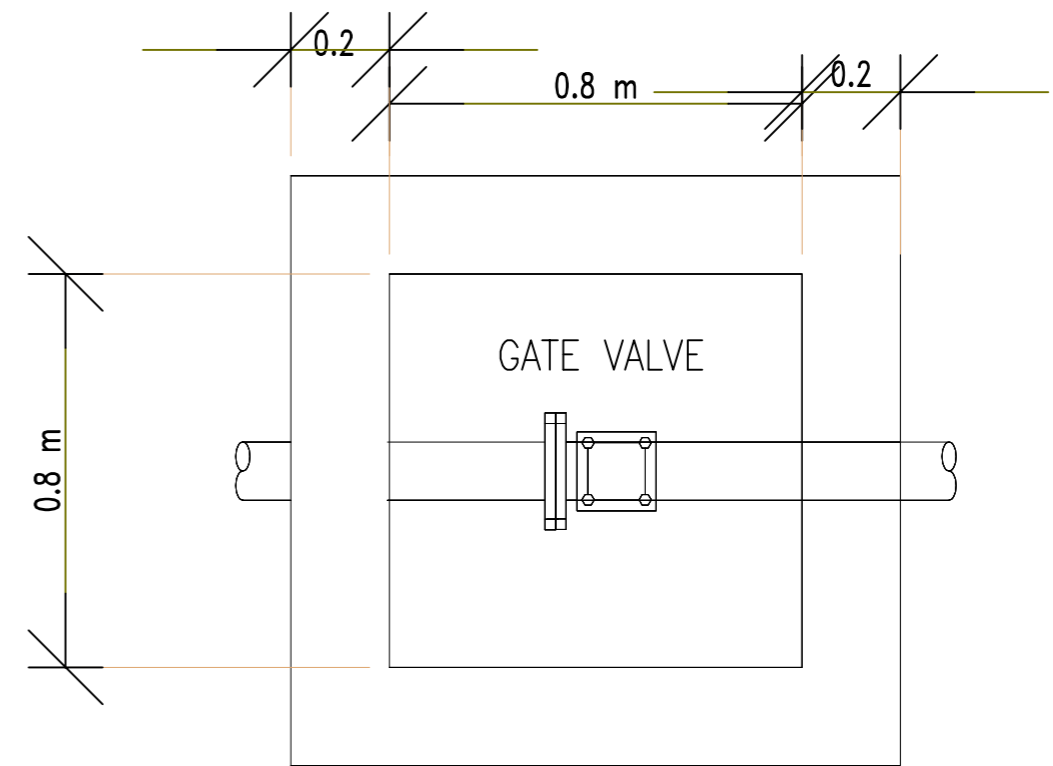
Length of the chamber will be adjusted according to the dimensions of the valves , connections and fitting so the valve shall be positioned with enough space for removing and reinstallation during maintenance .

All dimensions in meter.



**Elevation View Scale 1:50**

**مسقط عرضي**



**Plan View Scale 1:50**




**مسقط أفقي**

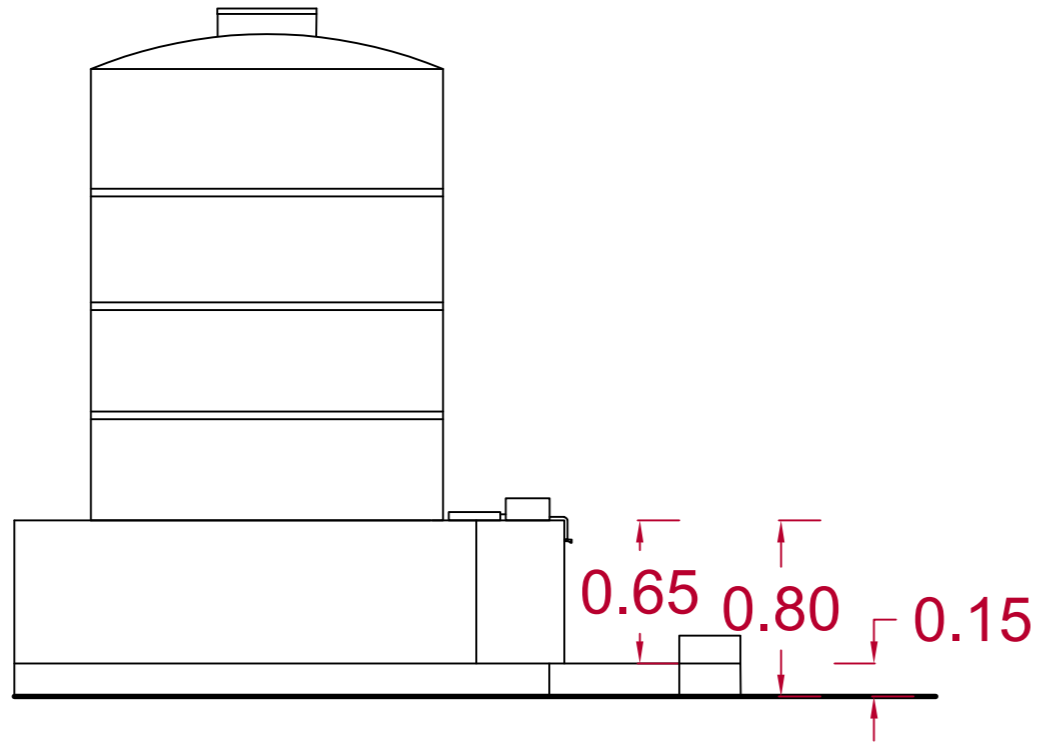
**1.8**

**Clarification :**

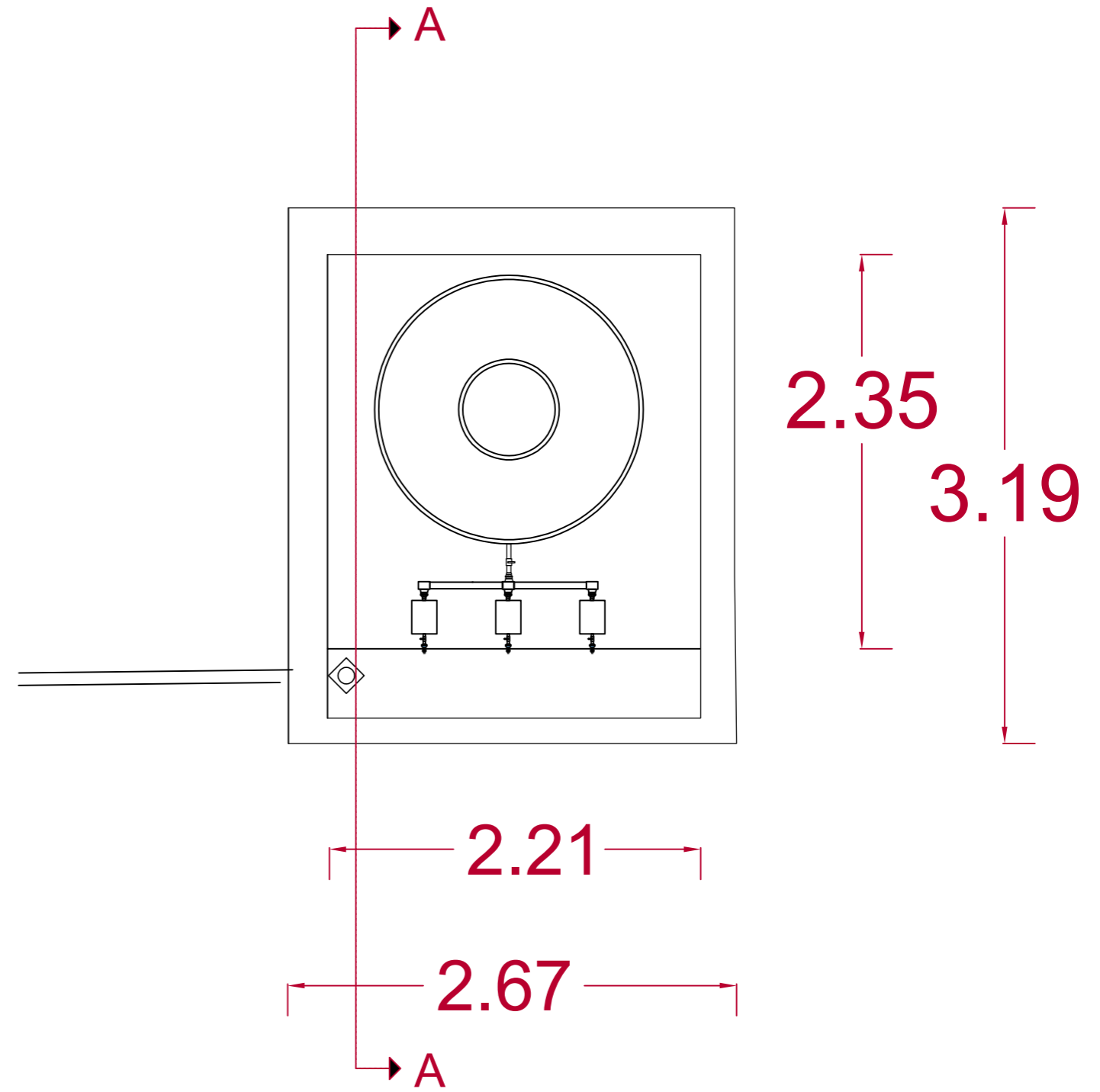
- 1- Buildings of solid cement blocks ,size (20 \* 20 \* 40)cm.
- 2 -Cover made of granulated and reinforced iron with all mounting accessories from Schellmann tires 1.5 Hinch, 2 mm thick .
- 3 -Ordinary concrete with a mixing ratio of (1:3:5 cement: sand: curry) with a thickness of 15 cm .
- 4 -Water drain pipe 1.5 inch .

**Valve Room Details**

Prepared by:  Samaritan's Purse INTERNATIONAL RELIEF	Funded by:  Samaritan's Purse INTERNATIONAL RELIEF	Project Title: REHABILITATIONS OF AL MASHOURE WATER PROJECT	Drawing Title: VALVE ROOM DETAILS	Designed and reviewed by: SPRY - WASH Sector	Status: Final Draft	North: 	Drawing No: A1-24
		Project Location: ALBREYQA DISTRACT – ADEN GOV.	Project Name: RAINS OF RESILIENCE 2026	Approved by: SPRY - WASH Sector	Project No: Date: 09/06/2026	Paper Size: A3 Scale: As Shown	

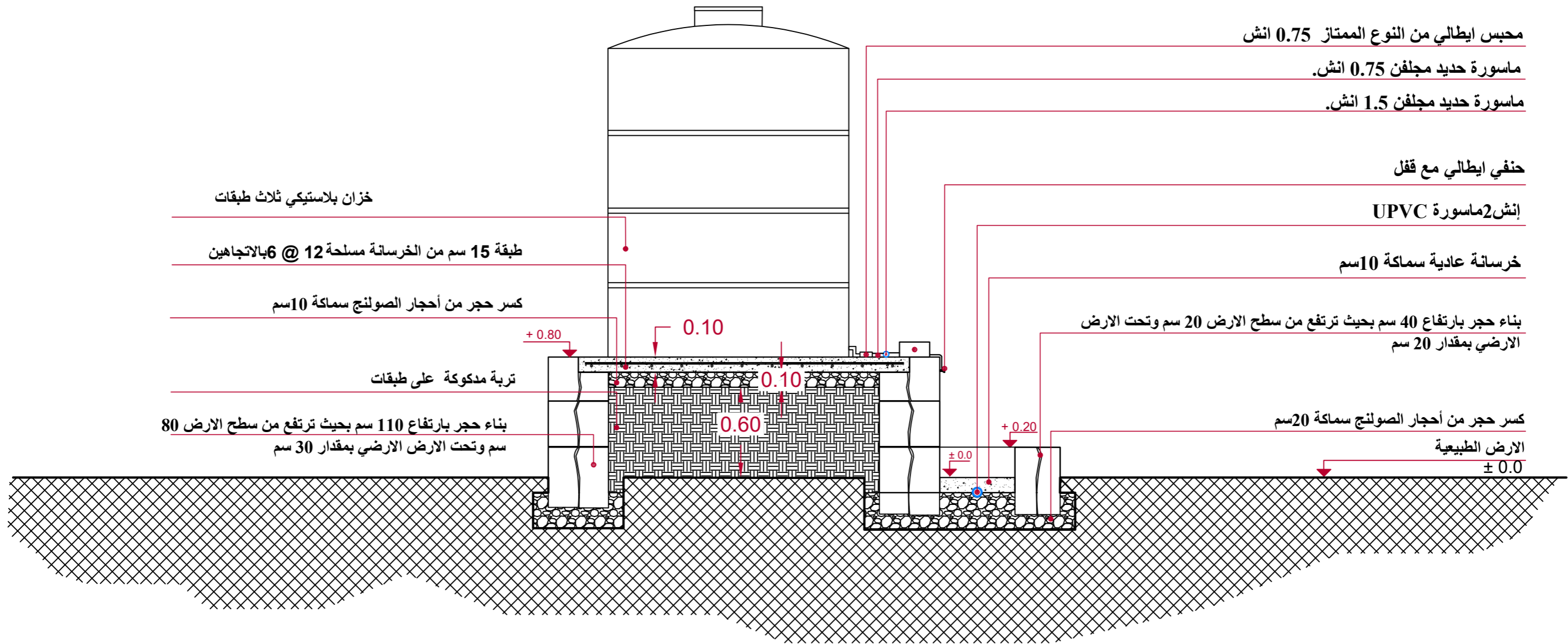


Front Elevation  
 واجهة امامية



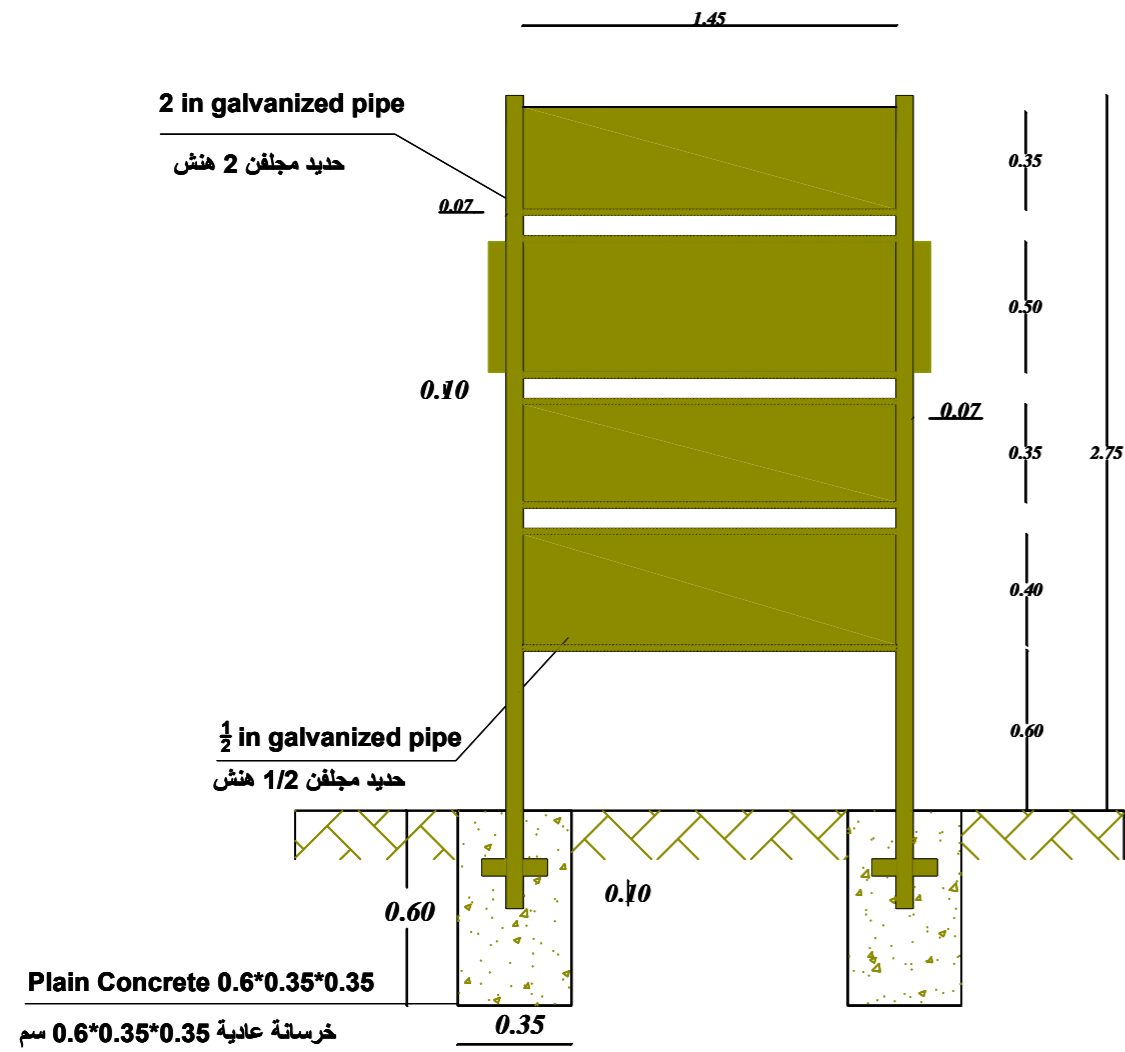
The Plan  
 المسقط

Prepared by: Samaritan's Purse® INTERNATIONAL RELIEF	Funded by: Samaritan's Purse® INTERNATIONAL RELIEF	Project Title: REHABILITATIONS OF AL MASHOURE WATER PROJECT	Drawing Title: Water Point Side View	Designed and reviewed by: SPRY - WASH Sector	Status: Final Draft	North: 	Drawing No: A1-25
		Project Location: ALBREYQA DISTRICT - ADEN GOV.	Project Name: RAINS OF RESILIENCE 2026	Approved by: SPRY - WASH Sector	Project No: Date: 09/06/2026	Paper Size: A3 Scale: As Shown	



Section A-A  
قطاع A-A

Prepared by: Samaritan's Purse® INTERNATIONAL RELIEF	Funded by: Samaritan's Purse® INTERNATIONAL RELIEF	Project Title: REHABILITATIONS OF AL MASHOURE WATER PROJECT	Drawing Title: Water Point Section	Designed and reviewed by: SPRY - WASH Sector	Status: Final Draft	North: N W E S	Drawing No: A1-26
		Project Location: ALBREYQA DISTRICT - ADEN GOV.	Project Name: RAINS OF RESILIENCE 2026	Approved by: SPRY - WASH Sector	Project No: Date: 09/06/2026	Paper Size: A3 Scale: As Shown	



Dimensions Details  
تفاصيل الأبعاد

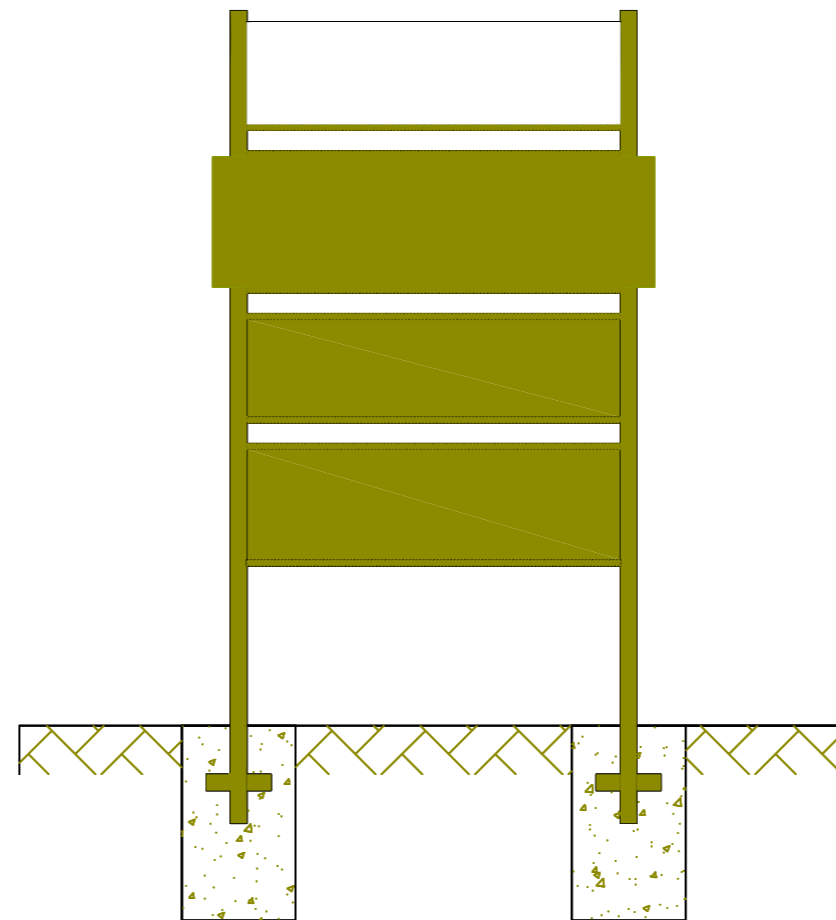
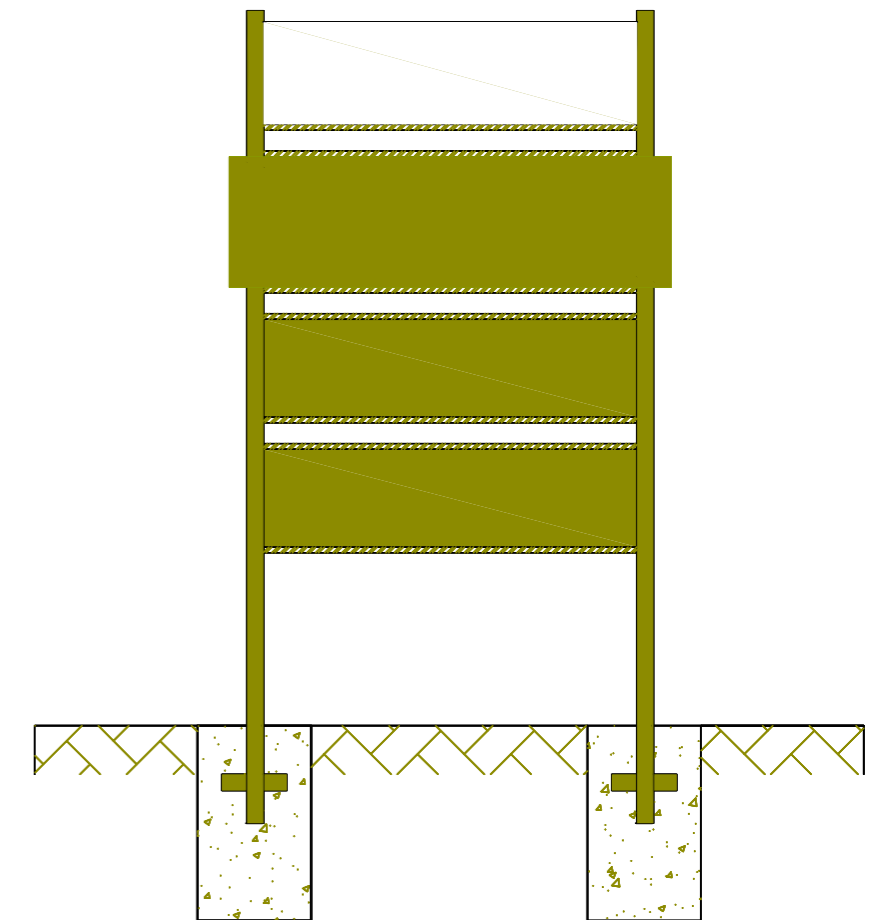


Plate Front side Elevation  
واجهة اللوحة الأمامية



Backside Elevation  
واجهة اللوحة الخلفية

1.0 m

0.6 m

## DETAILS MARBLE PAINTING

تفاصيل اللوحة الرخامية

Prepared  
by:



Funded  
by:



Project Title:

REHABILITATIONS OF AI  
MASHOURE WATER PROJECT

Project Location:

ALBREYQA DISTRICT -  
ADEN GOV.

Drawing Title:

PAINTED SIGN FOR PROJECT COMPLETION

Project Name:

RAINS OF RESILIENCE 2026

Designed and reviewed by:

SPRY - WASH Sector

Approved by:

SPRY - WASH Sector

Status:

**Final Draft**

Project No:

09/06/2026

Paper Size: **A3**

Scale

As Shown

North:



Drawing No:

**A1-28**