



Norwegian Ministry
of Foreign Affairs

Construction of Solar Energy System
For
Khan Younis Waste Water Treatment Plant
(KY WWTP)



Norwegian Ministry
of Foreign Affairs



**ITB-PAL0000123905 - Construction of Solar Energy System
For
Khan Younis Waste Water Treatment Plant
(KY WWTP)**

Tender Documents
Drawings

Executing Entity: UNDP
Employer:
January 2021

Consultant



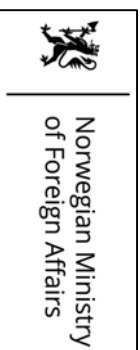
PV PLANT

DRAWING NAME	DRAWING NO.
PLANT-LAYOUT	P -01
PHASES- MARKING	P- 02
INVERTER MARKING	P- 03
EARTHING & LIGHTNING	P- 04
LIGHTNING COVERAGE	P- 05
Trenching-Layout	P- 06
LV-Cables-Route	P- 07
Medium Voltage Layout	P- 08
MV-SLD	P- 09
SLD	P- 10
Micro Grid SLD	P- 11

Notes:



Donor



Donor

Client



CONSULTANT



Project Name:
Provision of Detailed Design and Technical Assistance Services for the Construction of Solar Energy System for Khan Younis Waste Water Treatment Plant (KY WWTP)

RFP No. :
PAL- 0000093741

Drawing Title:

PLANT LAYOUT

Design
EMCC

Checked
EMCC

Drawing NO. :
P-01

Scale:
1 : 100

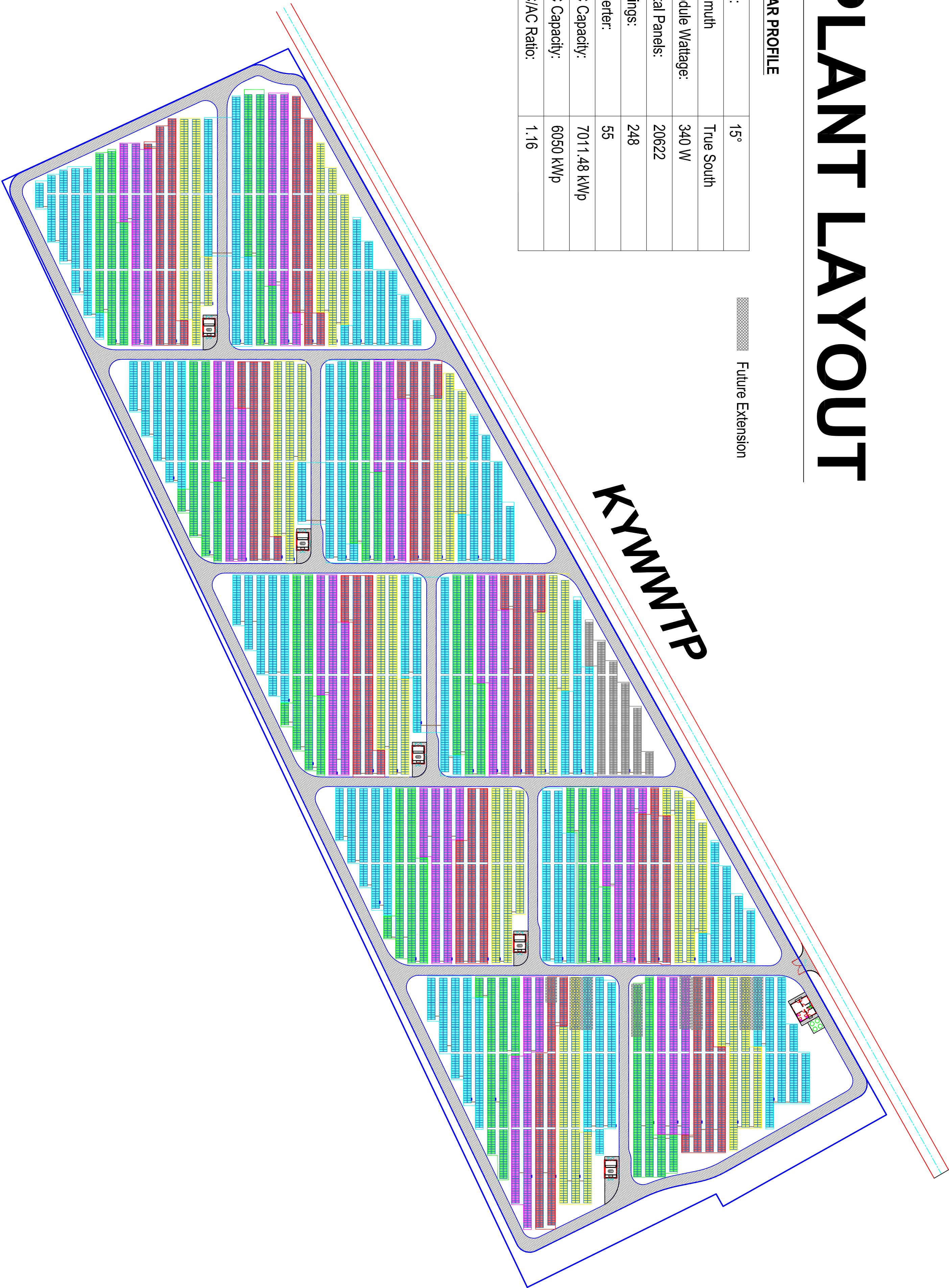
Date:
DEC. 2020

PLANT LAYOUT

SOLAR PROFILE

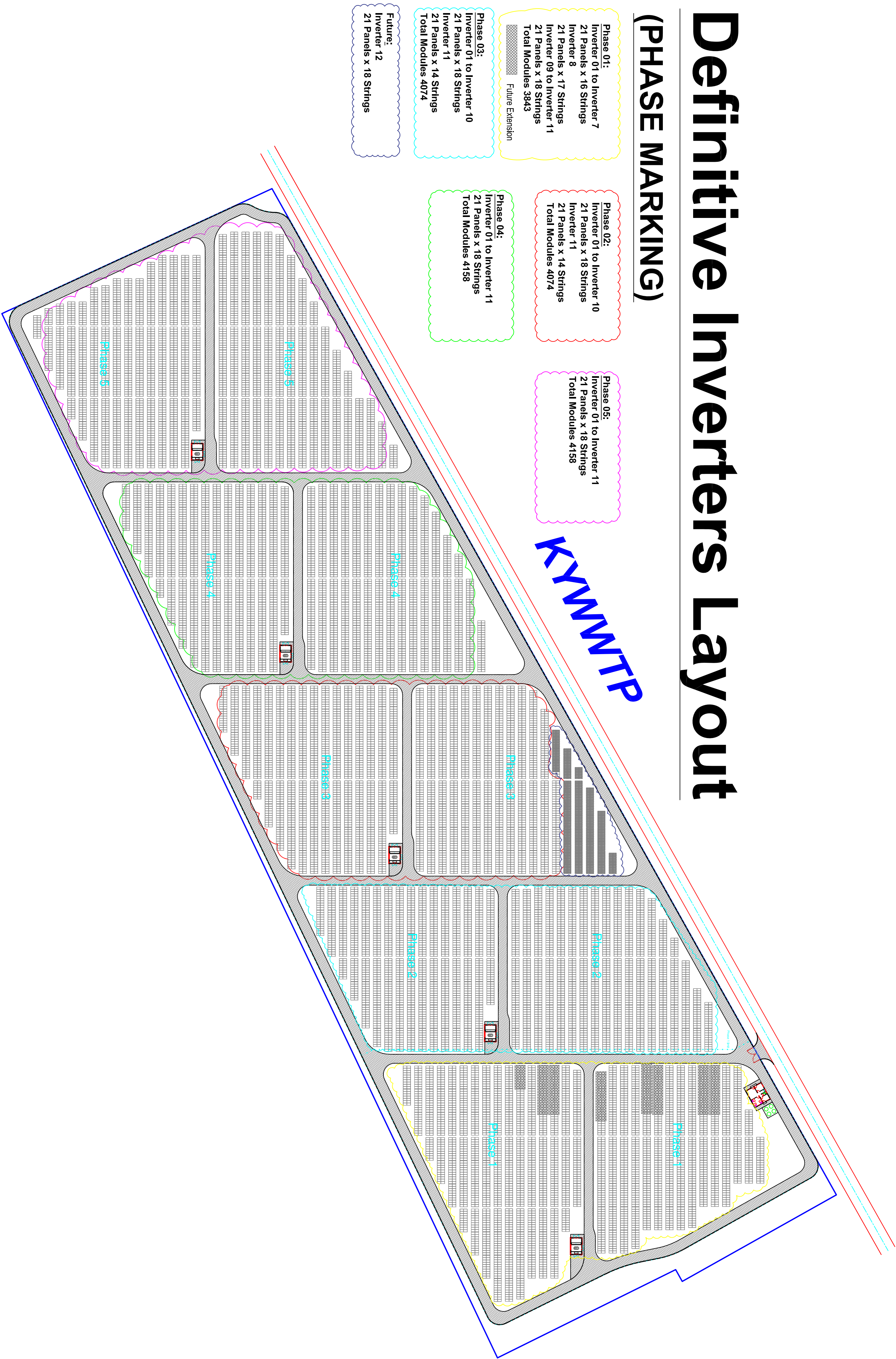
Tilt:	15°
Azimuth	True South
Module Wattage:	340 W
Total Panels:	20622
Strings:	248
Inverter:	55
DC Capacity:	7011.48 kWp
AC Capacity:	6050 kWp
DC/AC Ratio:	1.16

Future Extension



Definitive Inverters Layout

(PHASE MARKING)



Notes:



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Nonwegian Ministry
of Foreign Affairs

Client



CONSULTANT



Project Name:
Provision of Detailed Design and Technical Assistance Services for the Construction of Solar Energy System for Kyan Youtis Waste Water Treatment Plant (KY WWTP)

RFP No.:
PAL-0000093741

Drawing Title:

PHASE MARKING

Design

EMCC

Checked

EMCC

Drawing NO.

P-02

Scale:

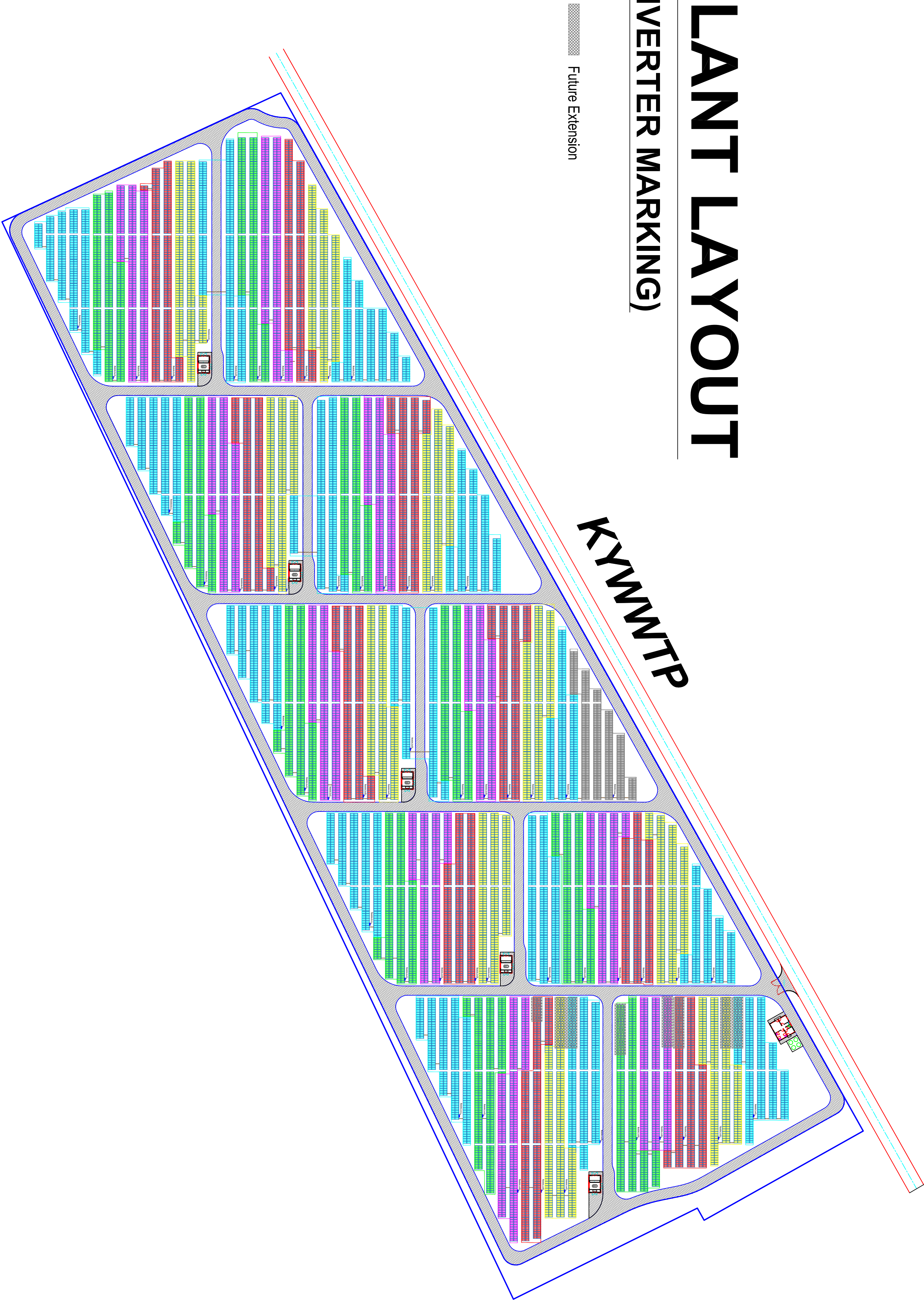
1 : 100

Date:

DEC. 2020

PLANT LAYOUT

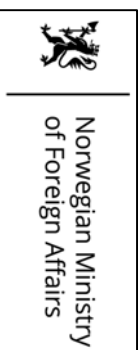
(INVERTER MARKING)



Notes:



Donor



Client



CONSULTANT



Project Name:
Provision of Detailed Design and Technical Assistance Services for the Construction of Solar Energy System for Kyan Youtis Waste Water Treatment Plant (KYYMWTP)

RFP No.:
PAL-0000093741

Drawing Title:
INVERTER MARKING

Design
EMCC

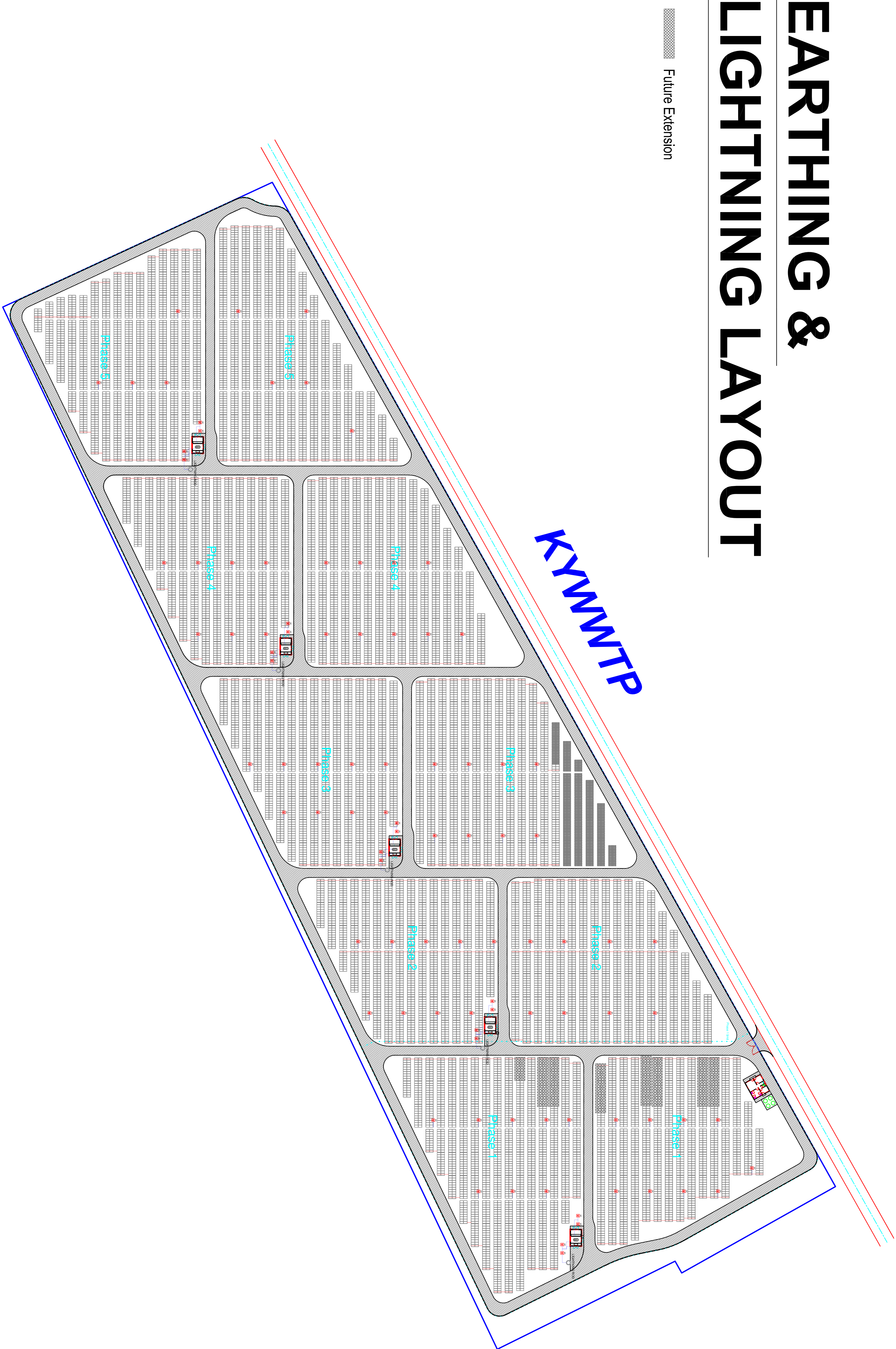
Checked
EMCC

Drawing NO.
P-03

Scale:
1 : 100

Date:
DEC. 2020

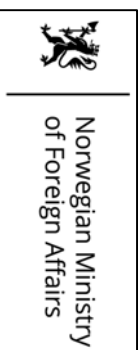
EARTHING & LIGHTNING LAYOUT



Notes:



Donor



Client



CONSULTANT



Project Name:
Provision of Detailed Design and Technical Assistance Services for the Construction of Solar Energy System for Kyan Youtils Waste Water Treatment Plant (KYY WWTTP)

RFP No. :
PAL-0000093741

Drawing Title:

EARTHING & LIGHTNING LAYOUT

Design
EMCC

Checked
EMCC

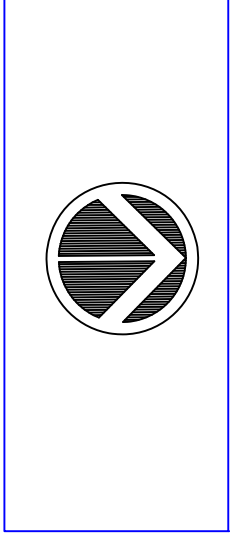
Drawing NO.
P-04

Scale:
1 : 100

Date:
DEC. 2020

The following table shows the results of the regression analysis. The dependent variable is the number of days absent from work due to illness or injury. The independent variables are age, gender, education, experience, tenure, and industry. The R-squared value indicates the proportion of variance explained by the model.

Variable	Beta Coefficient	t-statistic	p-value
Age	-0.05	-1.2	0.23
Gender	0.12	0.8	0.42
Education	-0.08	-0.5	0.61
Experience	0.03	0.2	0.85
Tenure	0.01	0.1	0.92
Industry	0.02	0.3	0.76
Constant	1.50	10.5	<0.001
R-squared			0.02



Norwegian Ministry
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The logo of the United Nations Development Programme (UNDP) is displayed. It features the United Nations emblem (a world map surrounded by olive branches) on the left, and the letters 'UN' stacked above 'DP' on the right, all within a blue rectangular border.

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The logo for EMCC (European Music Centre for Children) is located in the bottom right corner. It consists of the letters "EMCC" in a bold, blue, sans-serif font, with a red swoosh underline that starts under the "E" and curves under the "C"s. The logo is enclosed in a black rectangular border.

ment Plant (K. Y. W. N. I. P.)

RFP No.: PAL-0000093741

Drawing Title:

LIGHTNING COVERAGE

Design	EMCC
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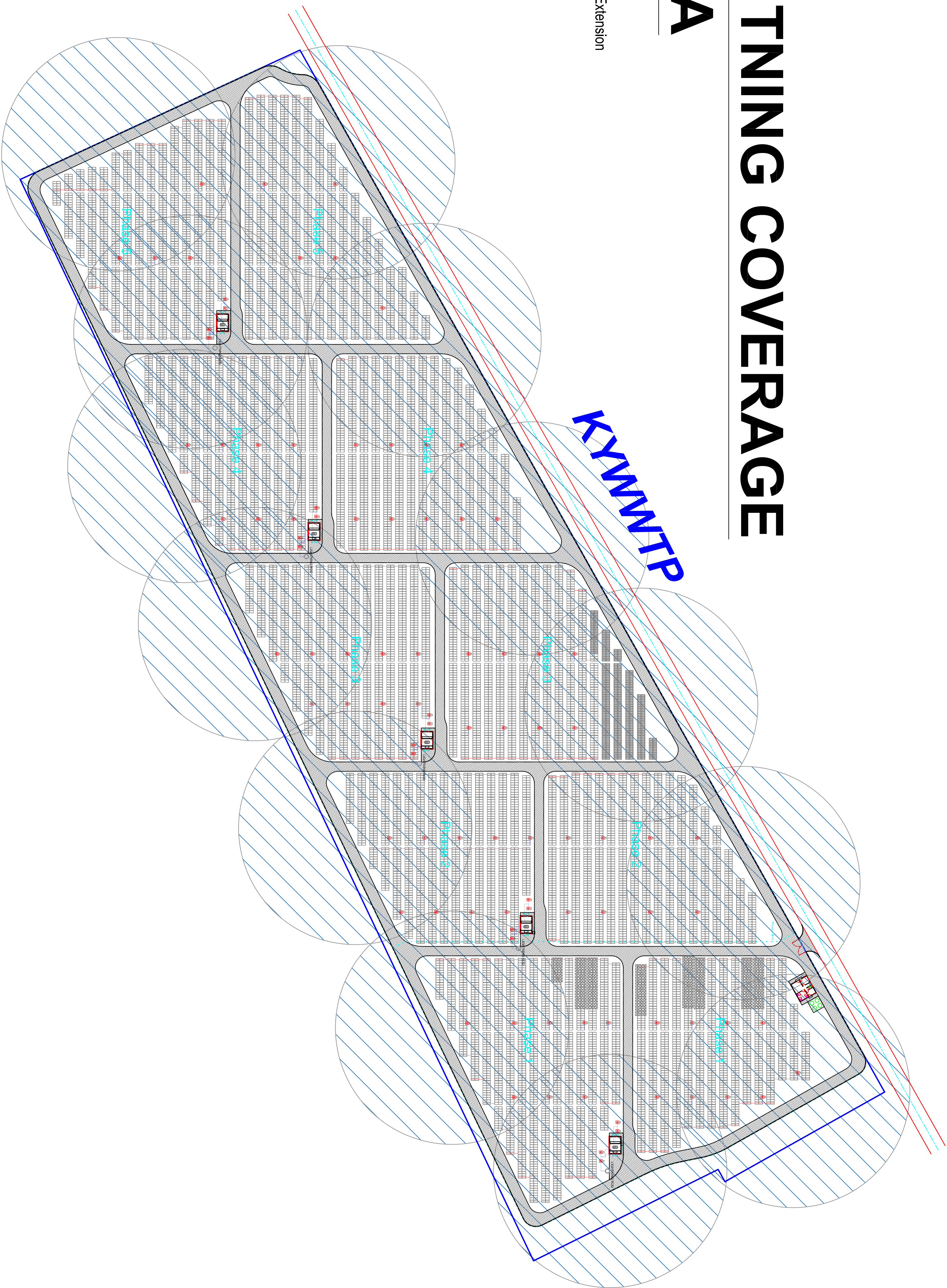
Checked	EMCC
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Drawing NO.	P -05
Scale:	1 : 100

Date:	DEC. 2020
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LIGHTNING COVERAGE

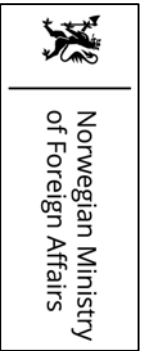
Future Extension



Notes:



Donor



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Project Name:
Provision of Detailed Design and Technical Assistance Services for the Construction of Solar Energy System for Khan Younis Waste Water Treatment Plant (KY WWTP)

RFP No. :
PAL- 0000093741

Drawing Title:
TRENCH LAYOUT

Design
EMCC

Checked
EMCC

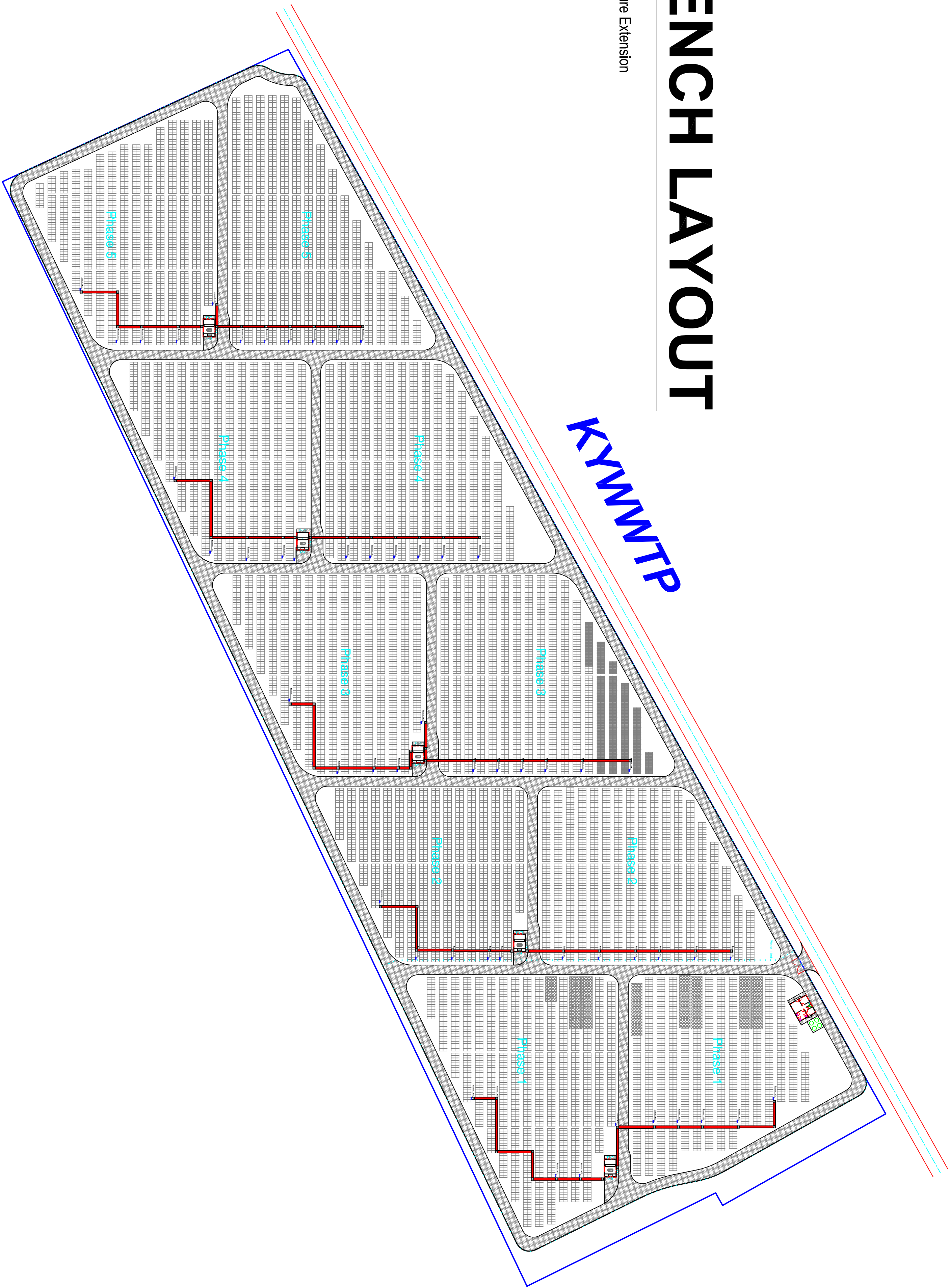
Drawing NO.
TR -06

Scale:
1 : 100

Date:
DEC. 2020

TRENCH LAYOUT

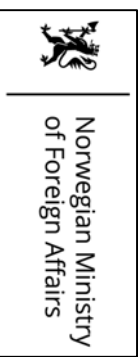
Future Extension



Notes:



Donor



Norwegian Ministry of Foreign Affairs

Client



CONSULTANT



Project Name:
Provision of Detailed Design and Technical Assistance Services for the Construction of Solar Energy System for Khan Younis Waste Water Treatment Plant (KY WWTP)

RFP No. :
PAL- 0000093741

Drawing Title:

LV-Cables-Route

Design

EMCC

Checked

EMCC

Drawing NO.

P -07

Scale:

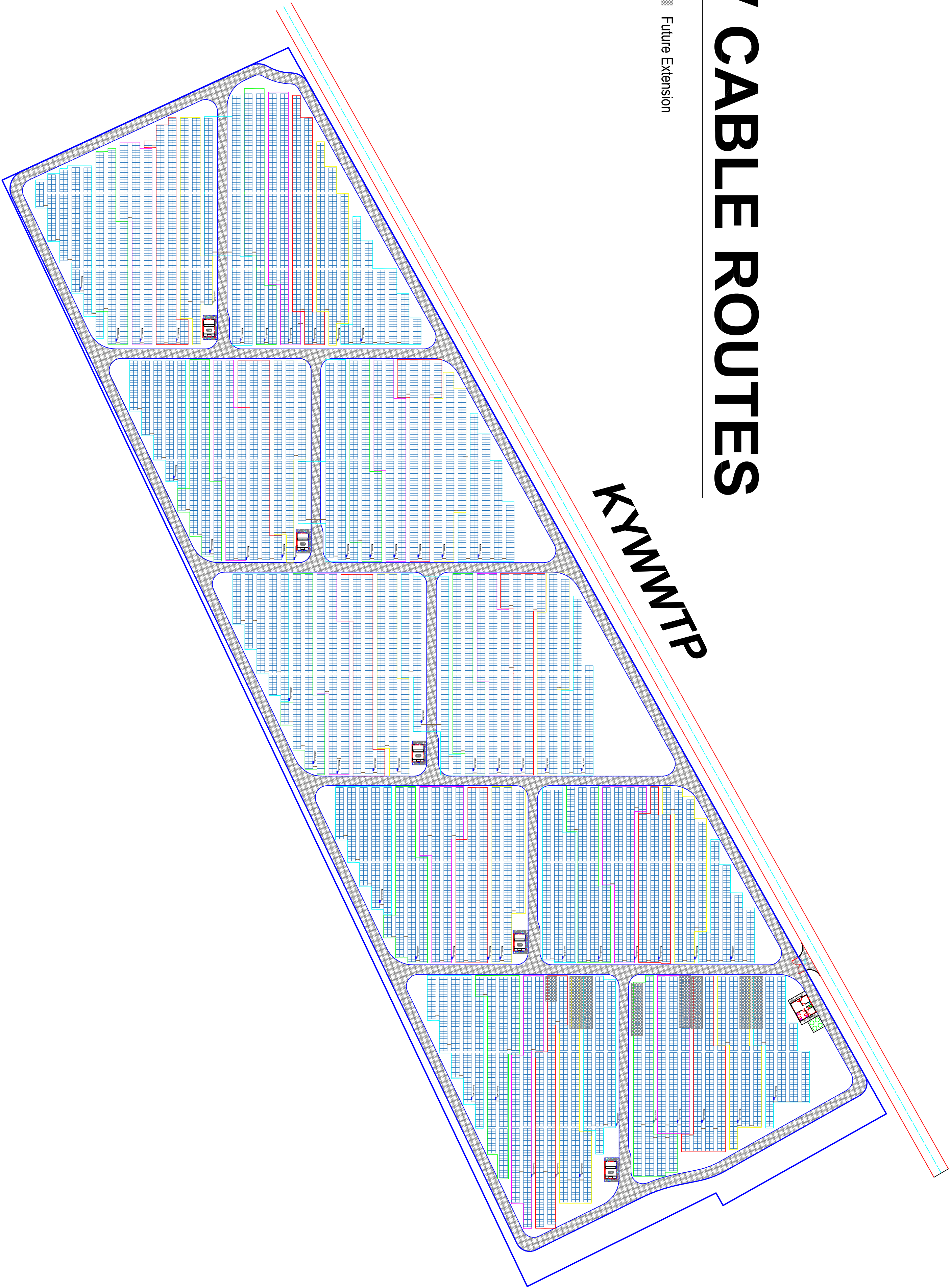
1 : 100

Date:

DEC. 2020

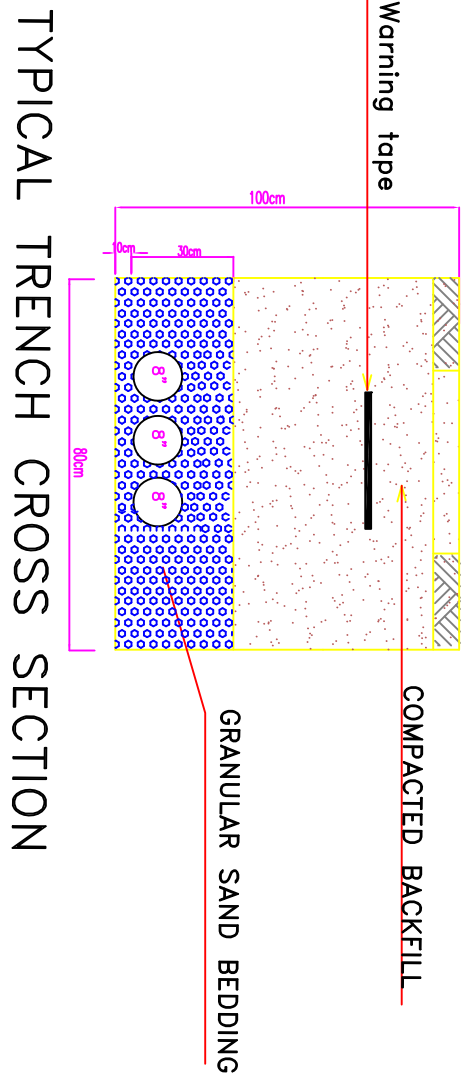
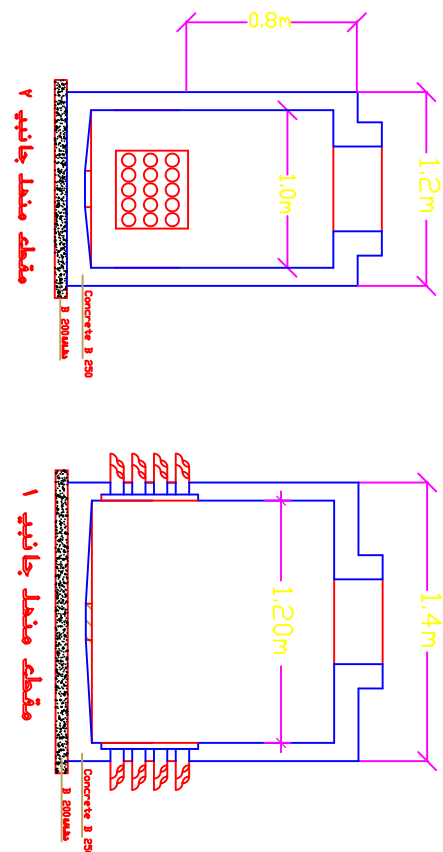
LV CABLE ROUTES

Future Extension

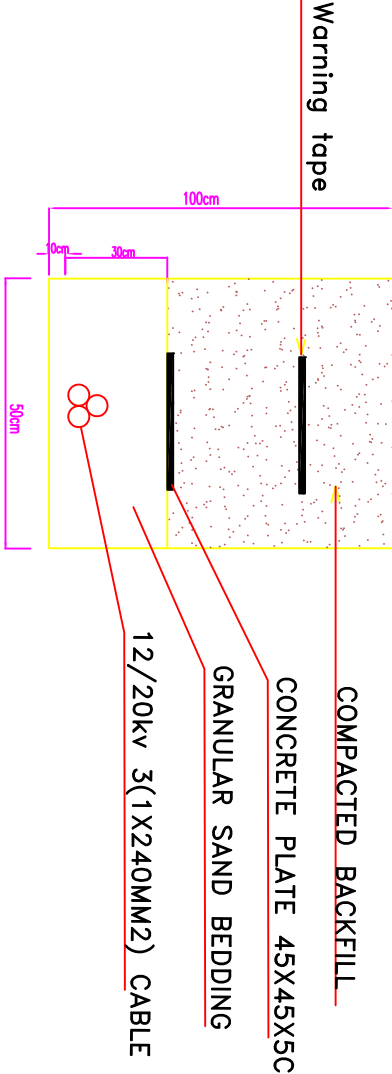


CLOSED CIRCUIT TV SYSTEM (CCTV)	
📹	DOM CAMERA FOR INTERNAL USE AND CEILING MOUNTING
📹	CCTV CAMERA FOR EXTERNAL USE, IP66
📺	NVR RACK.
🔍	80cm-DIM MANHOLE. WITH 5 TON STEEL FRAMED COVER.
🏠	100x120cm-DIM MANHOLE. WITH 8 TON STEEL FRAMED COVER.

Notes:	
LEGEND	
	132 " (LBD)
	PROPOSED MANHOLE
	CU ABLE 5*16mm2
	CU ABLE 5*10mm2



TYPICAL TRENCH CROSS SECTION

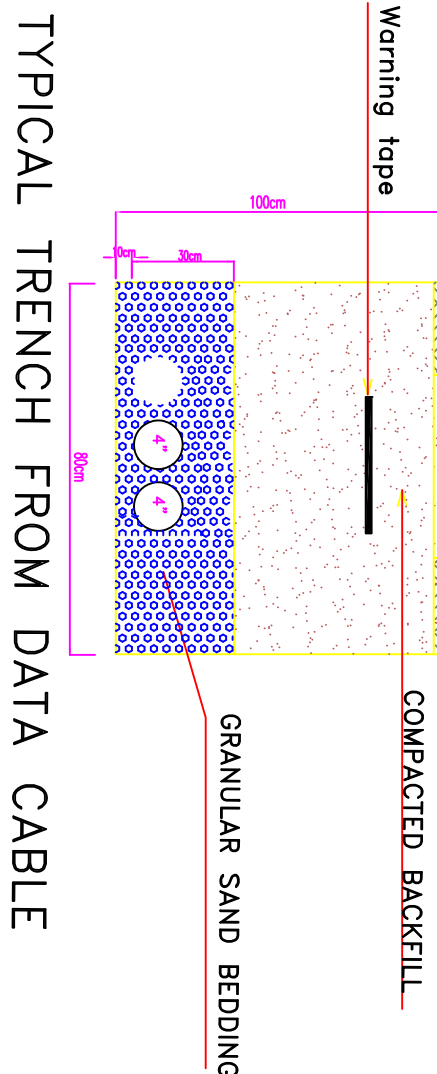
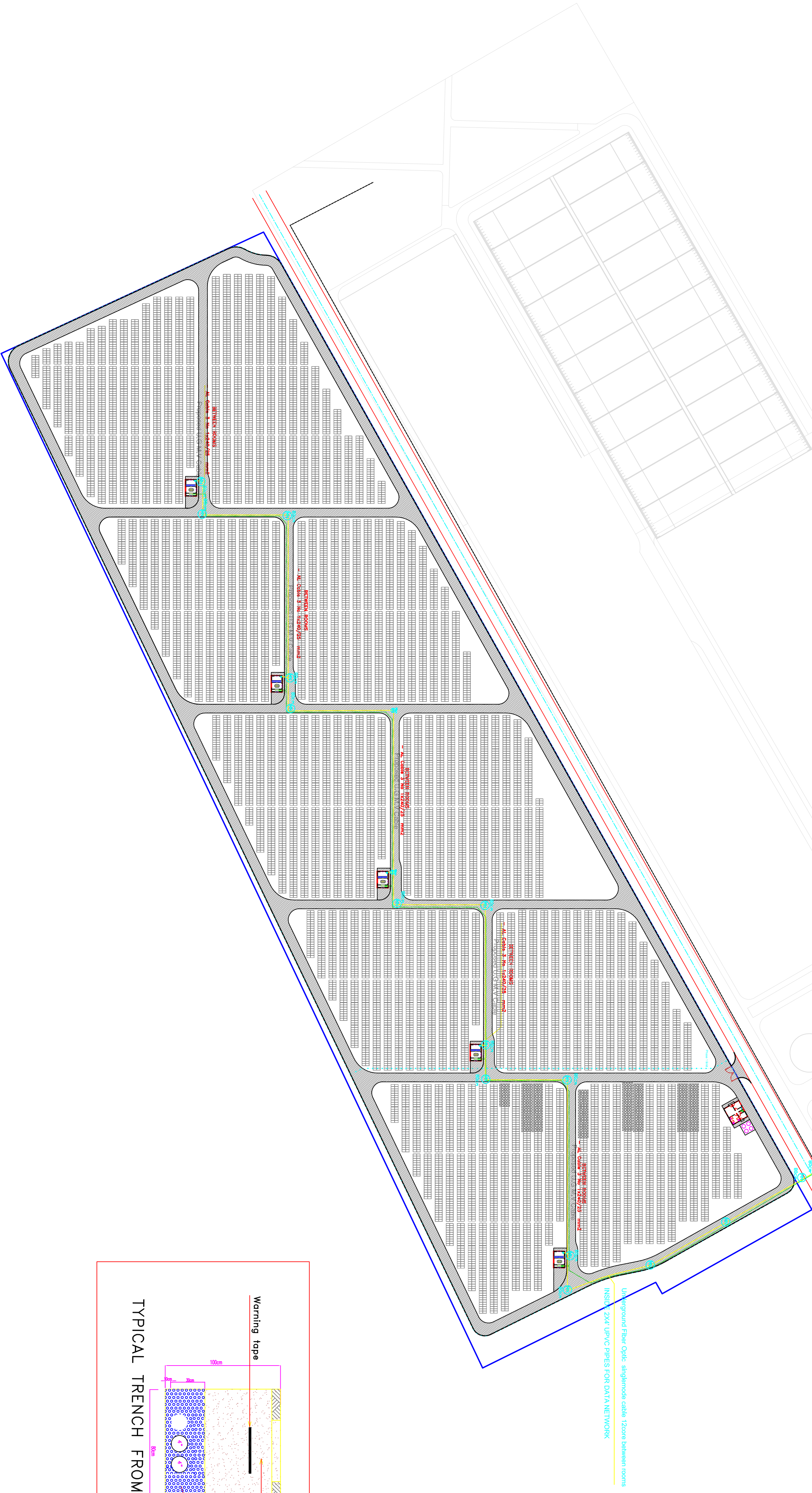


TYPICAL TRENCH CROSS SECTION

ROAD 15

F616 ROAD

KYWNTP

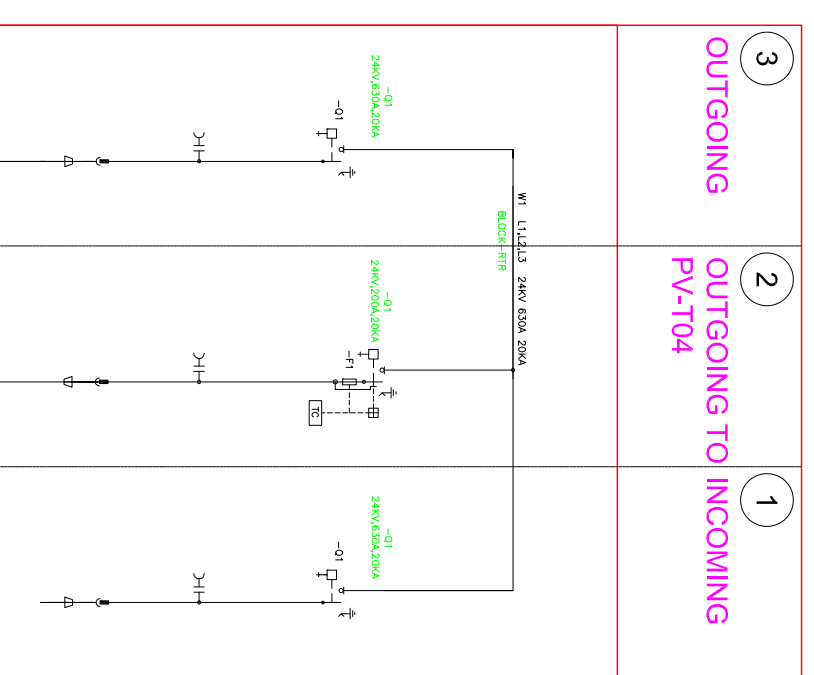
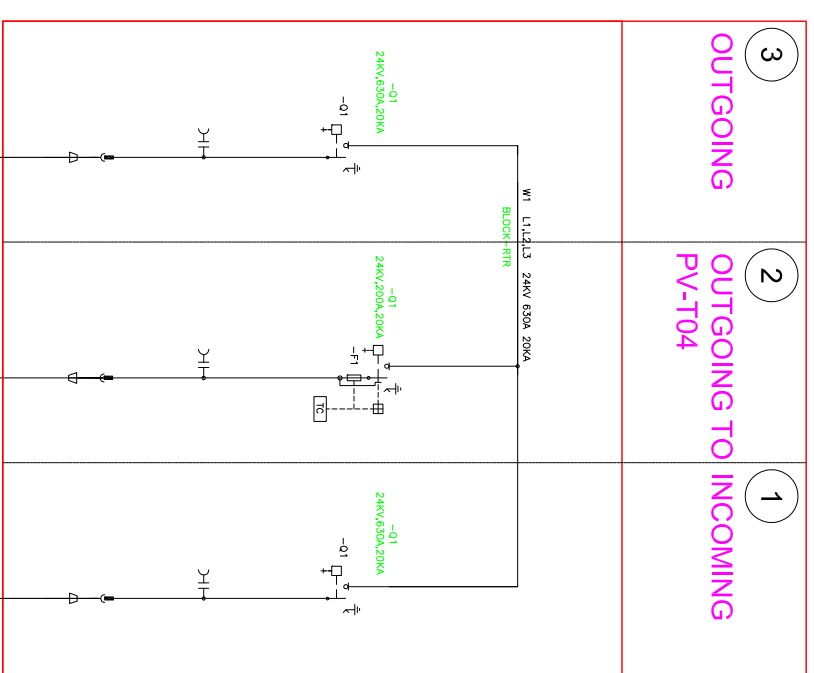
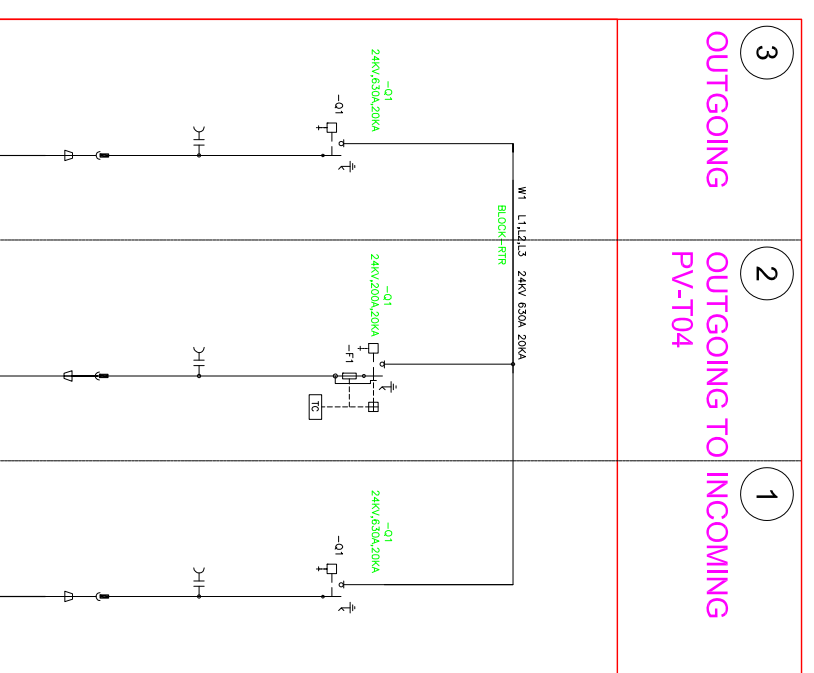
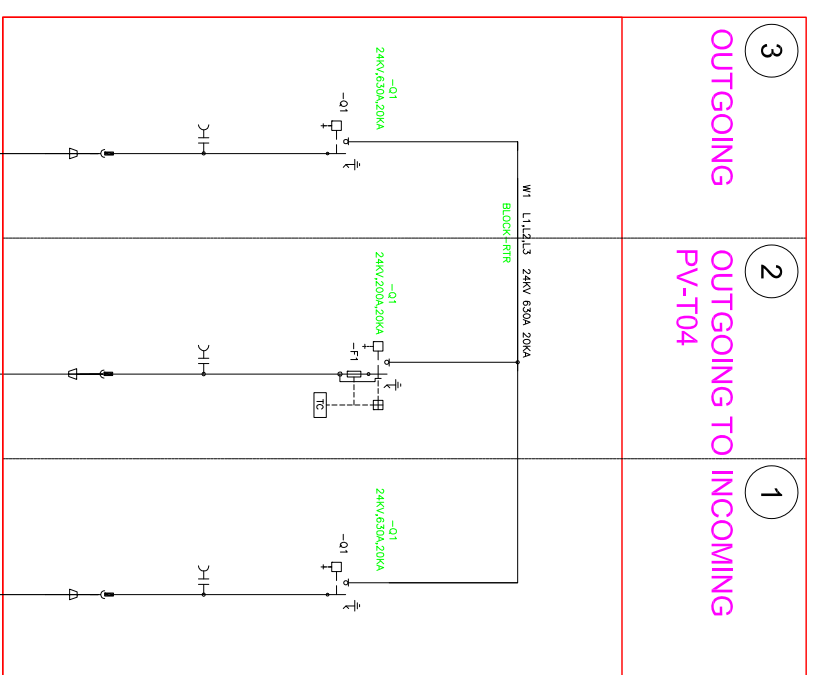


TYPICAL TRENCH FROM DATA CABLE

Project Name:	
Construction of Solar Energy System for Kyan Yenle Waste Water Treatment Plant (KY WWTTP)	
RFP No. :	PAL- 0000093741
Drawing Title:	Medium Voltage & Fiber cable Layout
Design	EMCC
Checked	EMCC
Drawing NO.	E- (08)
Scale:	
Date:	JAN, 2021

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CONSULTANT	

3 OUTGOING		1 INCOMING



Logos:	
	DISTRIBUTION TRANSFORMER
	CURRENT TRANSFORMER
	VOLTAGE TRANSFORMER
	CIRCUIT BREAKER (P-POLE)
	LV AC MCB
	CABLE CONNECTION
	OVER CURRENT & EARTH FAULT PROTECTION
	SURGE ARRESTER

Notes

Dono



CONSULTANT



Project Name:
Provision of Detailed Design and Technical Assistance Services for the Construction of Solar Energy System for Khan Younis Wastewater Treatment Plant (KY WWTP)

RFP No.:

PAL-0000093741

Drawing Title:

MY SLD

Design	EMCC
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Checked	EMCC
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Drawing NO.	P -09
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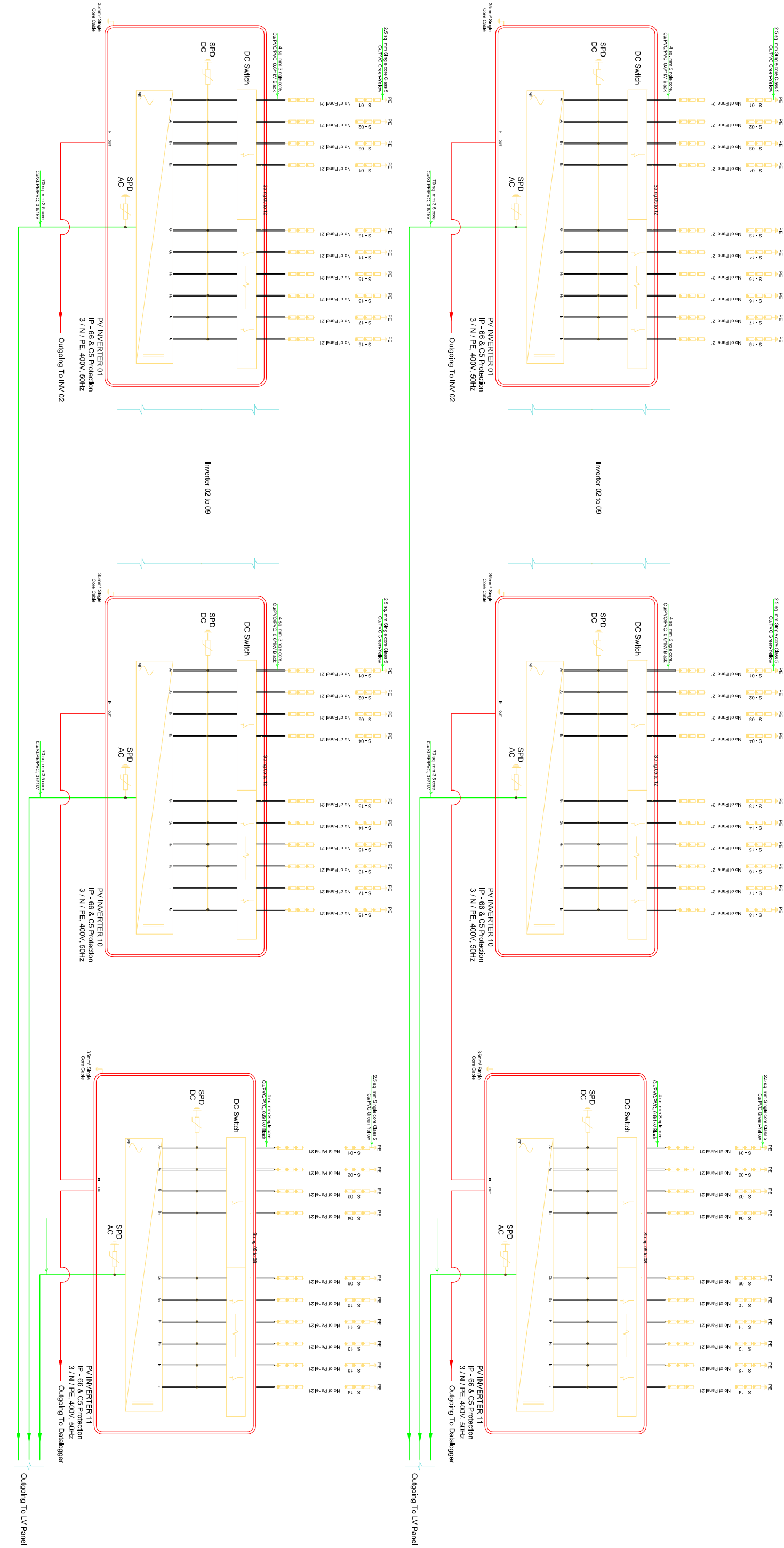
Scale: 1 : 100

Date: DEC. 2020

Notes:

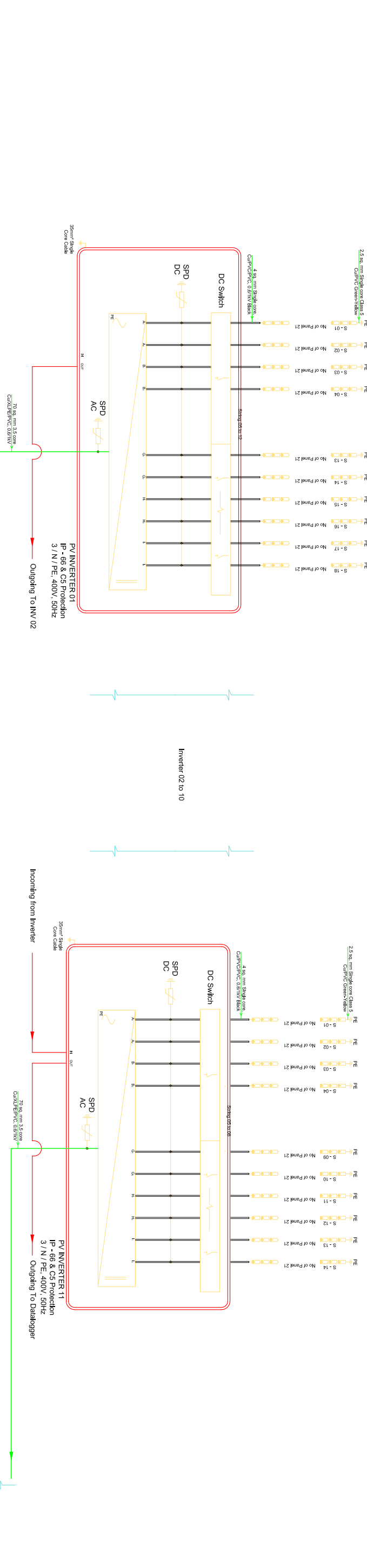
Phase 01:

- Inverter 01 to Inverter 7
- 21 Panels x 16 Strings
- Inverter 8**
- 21 Panels x 17 Strings**
- Inverter 9 to 11
- 21 Panels x 18 Strings



Phase 02:

- Inverter 01 to Inverter 10
- 21 Panels x 18 Strings
- Inverter 11
- 21 Panels x 14 Strings



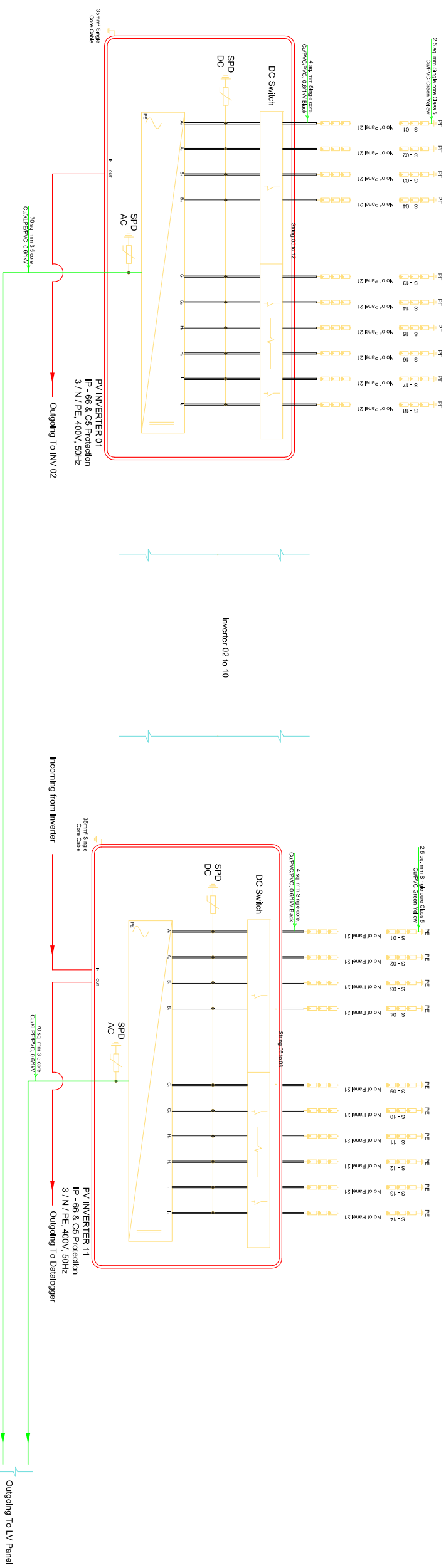
Phase 03:

- Inverter 01 to Inverter 10
- 21 Panels x 18 Strings
- Inverter 11
- 21 Panels x 14 Strings



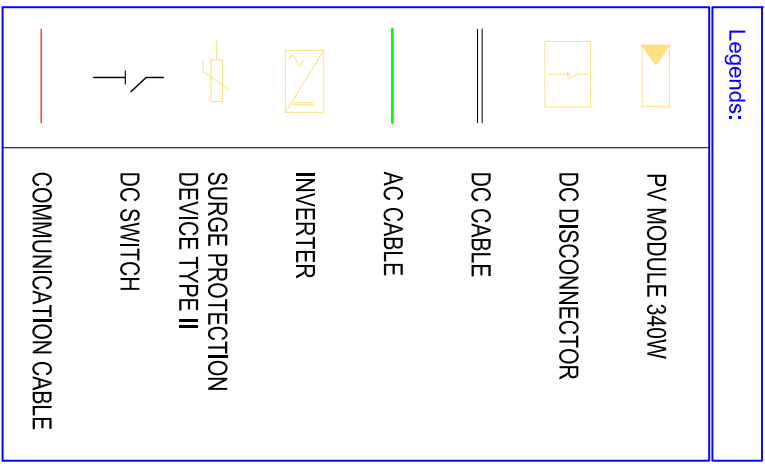
Phase 04:

- Inverter 01 to Inverter 11
- 21 Panels x 18 Strings



Phase 05:

- Inverter 01 to Inverter 11
- 21 Panels x 18 Strings



SOLAR PROFILE

Title:	15°
Azimuth	True South
Module Watteage:	340 W
Total Panels:	20622
Strings:	248
Inverter:	55
DC Capacity:	7011.48 kWp
AC Capacity:	6050 kWp
DC/AC Ratio:	1.16

Client

Donor

CONSULTANT

Project Name:
Provision of Detailed Design and Technical Assistance Services for the Construction of Solar Energy System for Khun Youla Waste Water Treatment Plant (Ky WWTP)

RFPP No. :
PAL- 0000093741

Drawing Title:
SLD

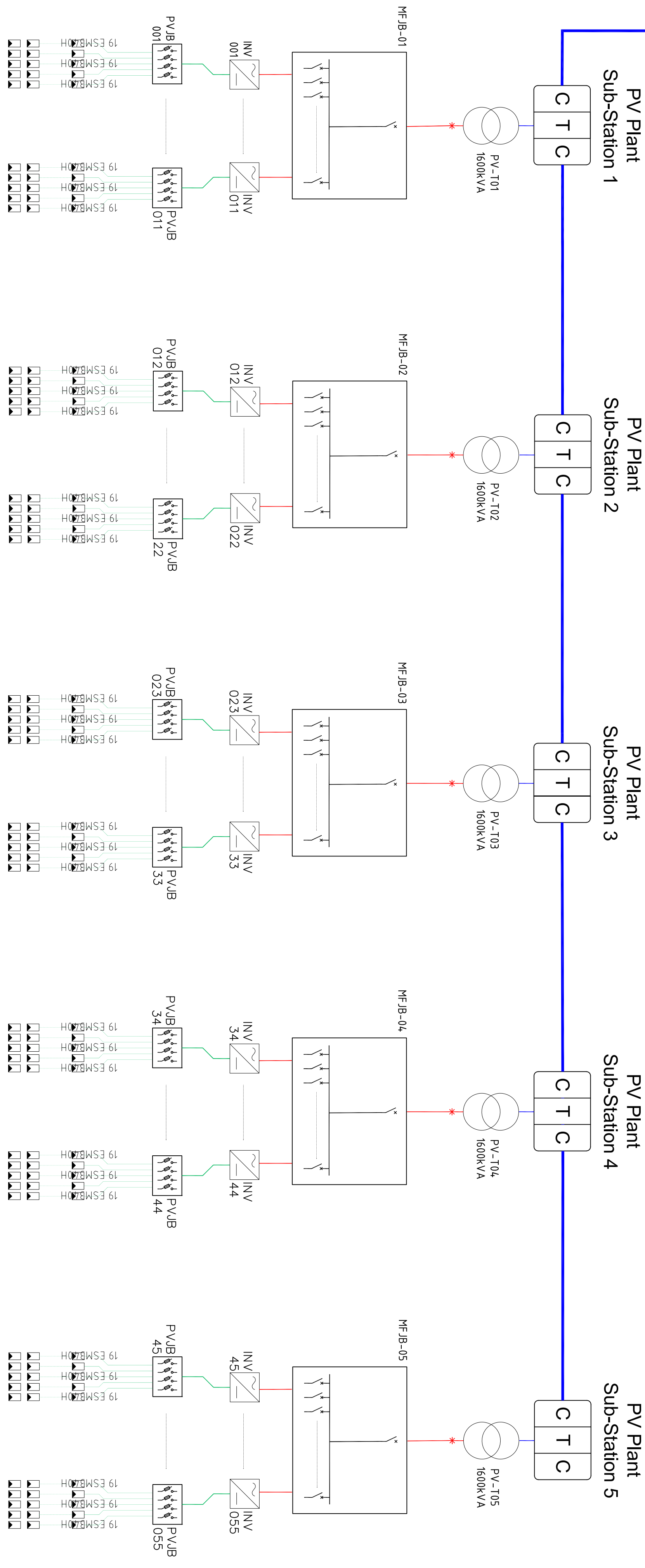
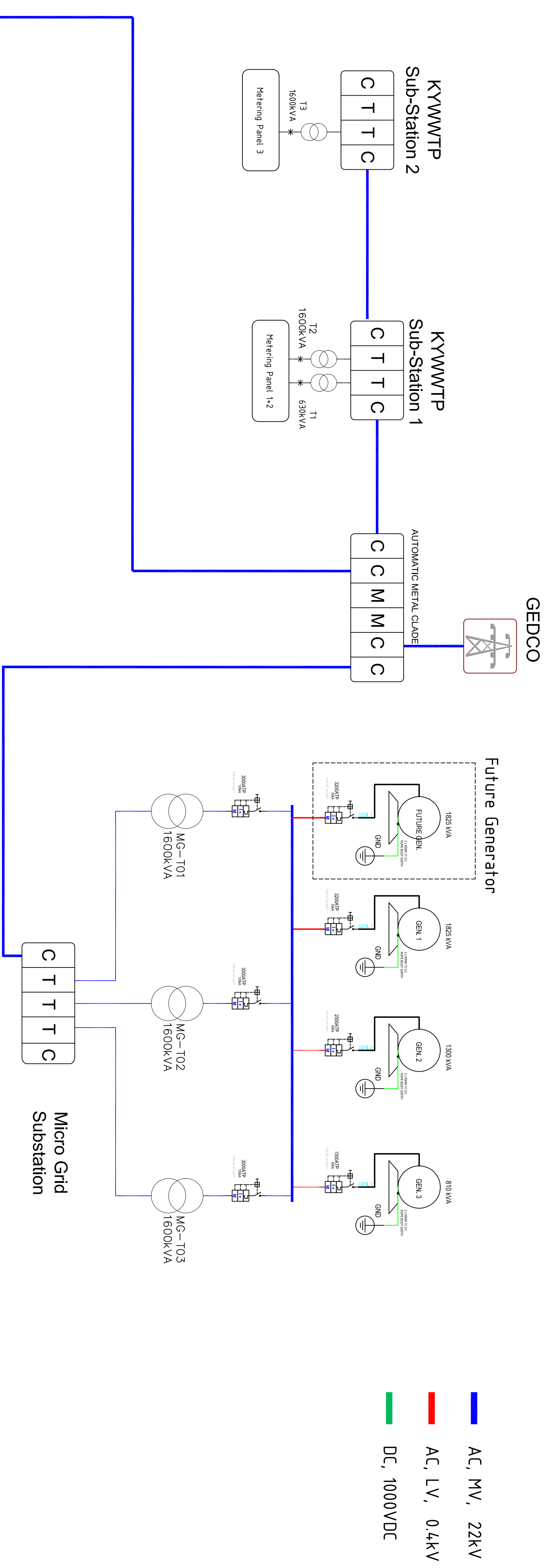
Design
EMCC

Checked
EMCC

Drawing NO.
P -10

Scale:
1 : 100

Date:
DEC. 2020



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Norwegian Ministry of Foreign Affairs

Client

UNDP

CONSULTANT

EMCC

Project Name:
Provision of Detailed Design and Technical Assistance Services for the Construction of Solar Energy System for Khun Youla Waste Water Treatment Plant (KY WWTP)

RFPP No. :
PAL- 0000093741

Drawing Title:
Micro Grid SLD

Design	EWCC
Checked	EWCC
Drawing NO.	P -11
Scale:	1 : 100
Date:	DEC. 2020

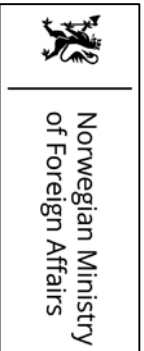
Site Plan Details

DRAWING NAME	DRAWING NO.
Existing Levels	L - 01
Site Layout	L - 02
Cleaning System Network	L - 03
Internal Road Details	L - 04
Fence Details	L - 05
Entrance Gate Details	L - 06
Steel Structure Unit Details-A	L - 07
Steel Structure Unit Details-B	L - 08
Water Tanks Shed Details -A	L - 09
Water Tanks Shed Details -B	L - 10
Cleaning System Details	L - 11

Notes:



Donor



Norwegian Ministry of Foreign Affairs

Client



CONSULTANT



Project Name:
Provision of Decentralized Design and Technical
Support for the Development of a
Solar Energy System for Kibin Yousa Waste
Water Treatment Plant (KWWTP)

RFP No. :
PAL-0000093741

Drawing Title:
Existing Levels

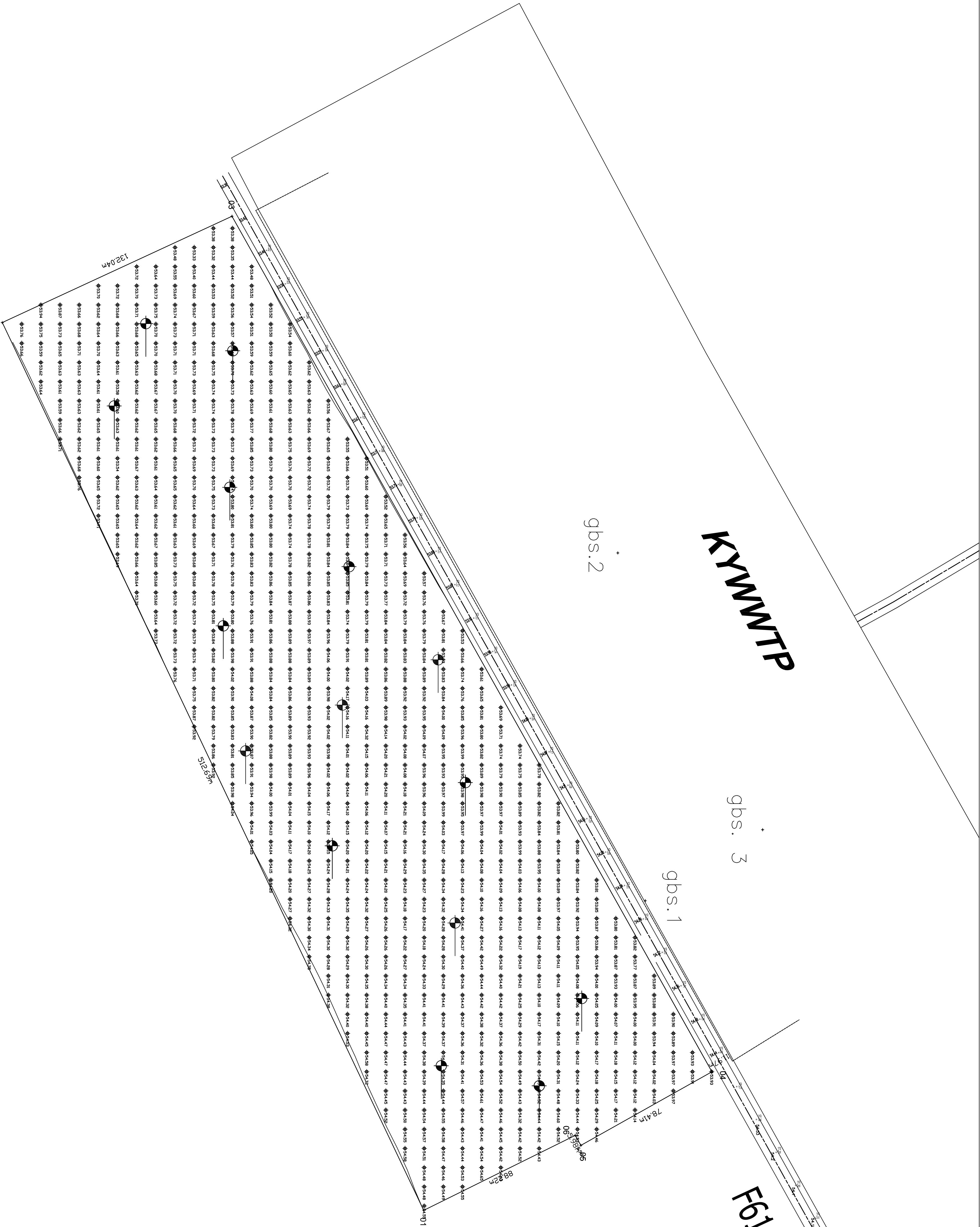
Design
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Checked
EMCC

Drawing NO.
L-01

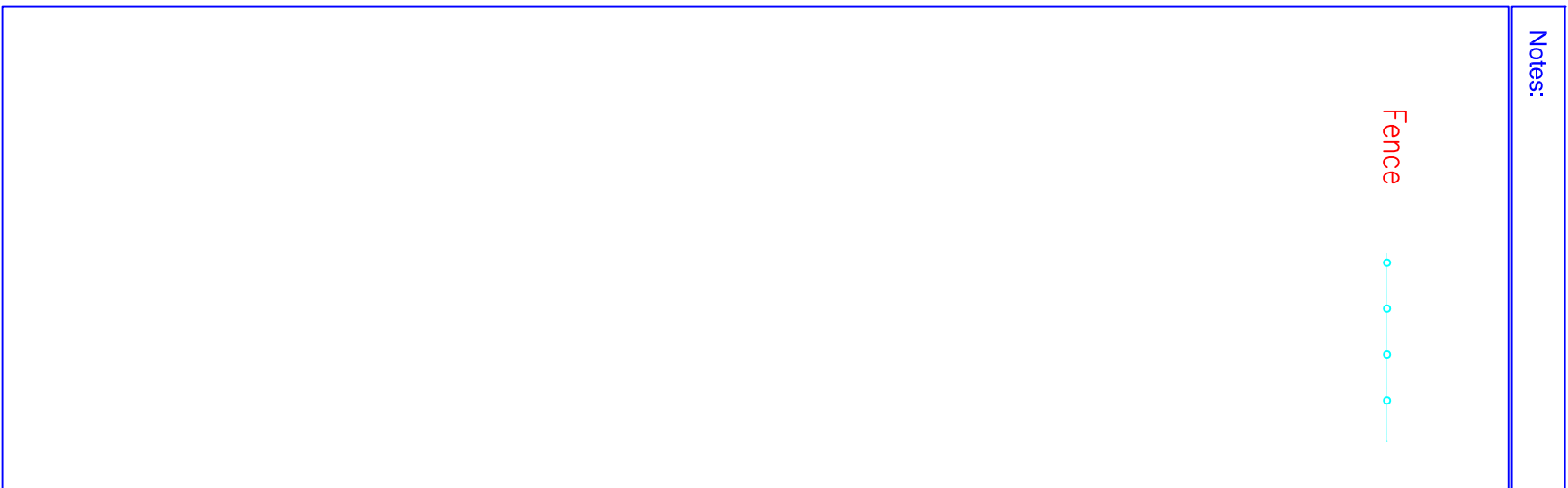
Scale:
Date: MAY. 2020

02



Notes:

Fence



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Client



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Project Name:
Provision of Detailed Design and Technical
Support for the Development of a
Solar Energy System for Kaya Yousa Waste
Water Treatment Plant (KYYWWTP)

RFP No. :

PAL- 0000093741

Drawing Title:

Site Layout

Design

EMCC

Checked

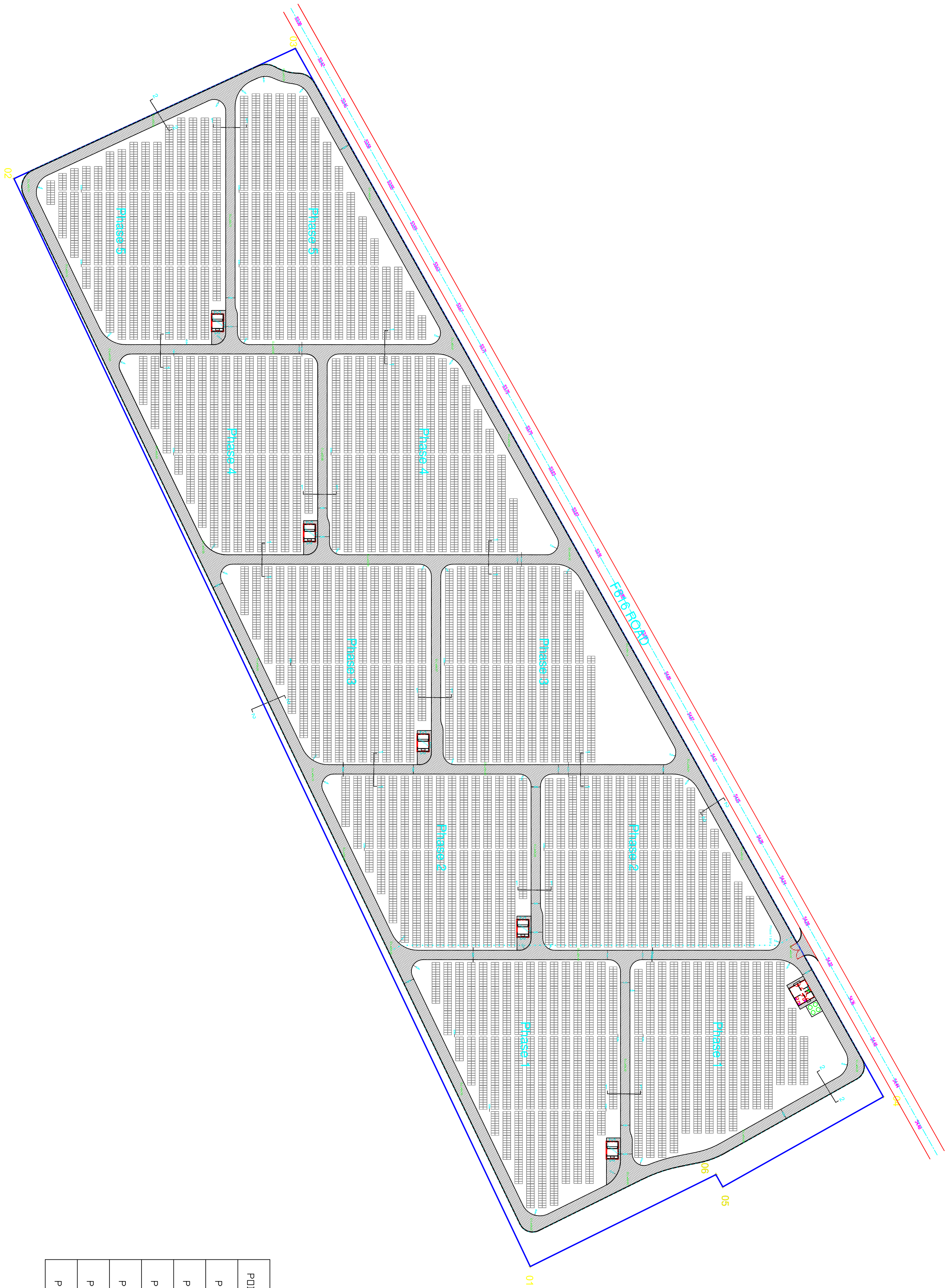
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Drawing NO.

L- 02

Scale:

Date: MAY, 2020

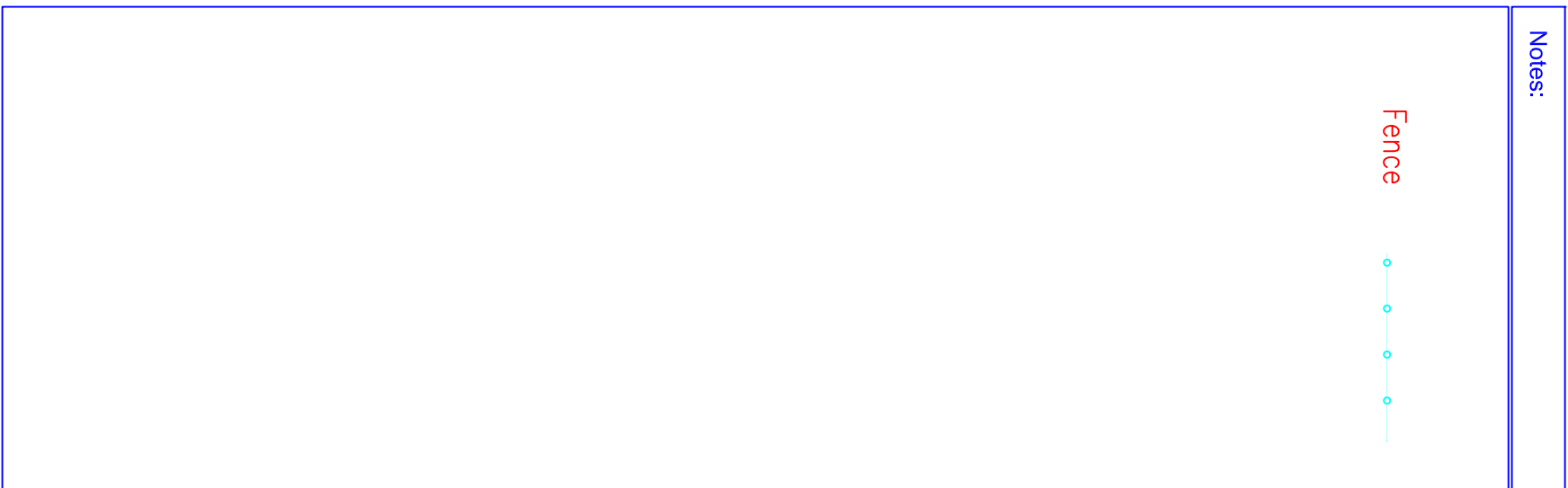


BOUNDARY-POINTS

POINT	X	Y
P 1	86489.514	75638.475
P 2	86026.365	75438.592
P 3	85970.923	75558.433
P 4	86417.239	75808.851
P 5	86455.608	75740.473
P 6	86450.394	75737.547

Notes:

Fence



Donor



Norwegian Ministry of Foreign Affairs

Client



Project Name:
Provision of Detailed Design and Technical Assistance for the Design and Construction of a Solar Energy System for Kaya Yousa Waste Water Treatment Plant (KYY WTPP)

RFP No. :
PAL-0000093741

Drawing Title:

Cleaning System Network

Design

EMCC

Checked

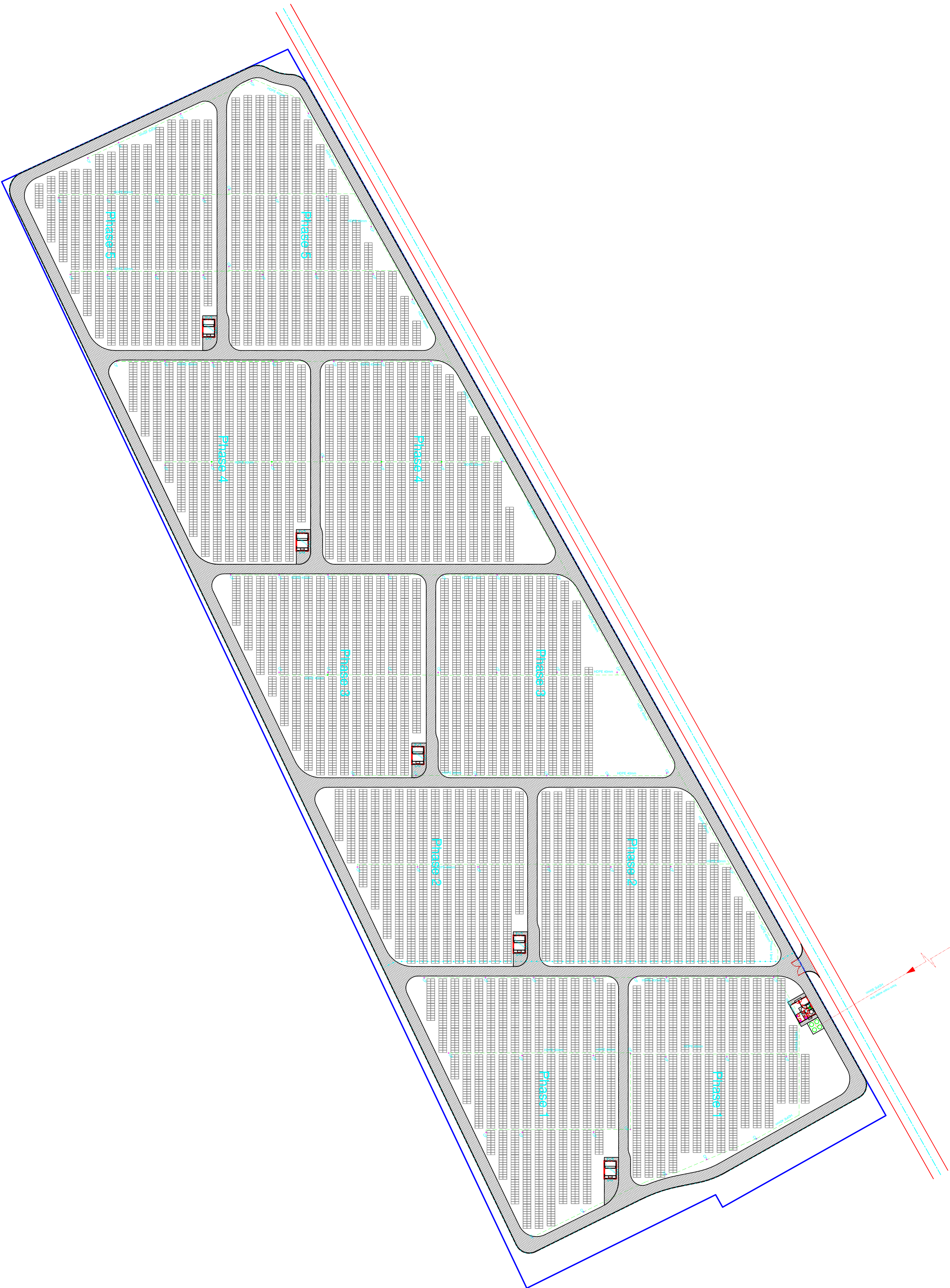
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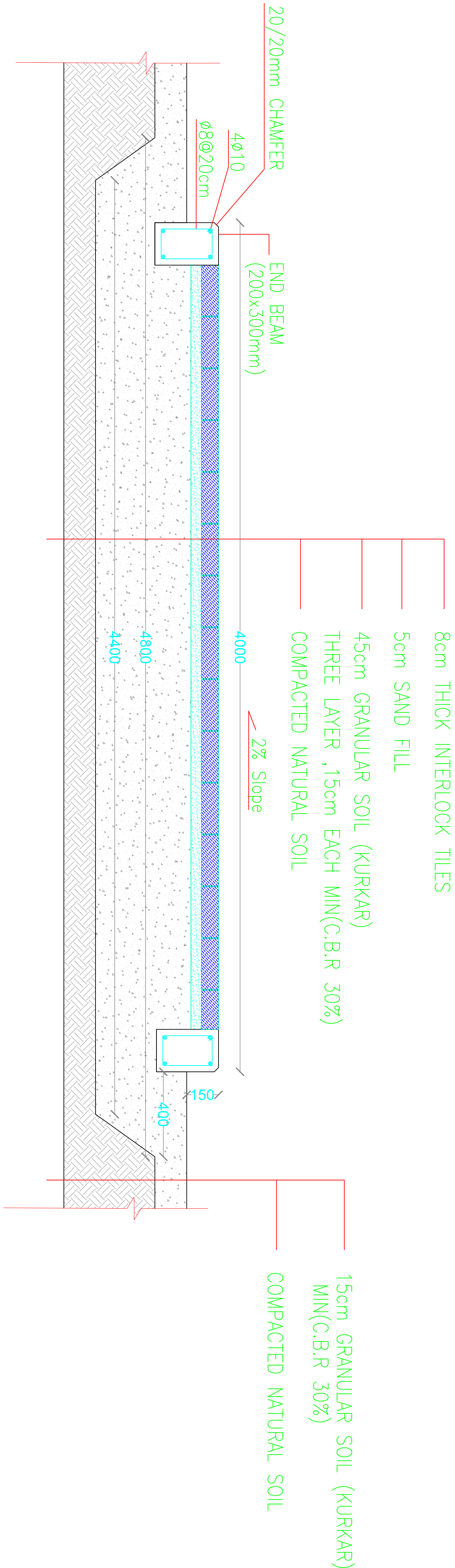
Drawing NO.

L-03

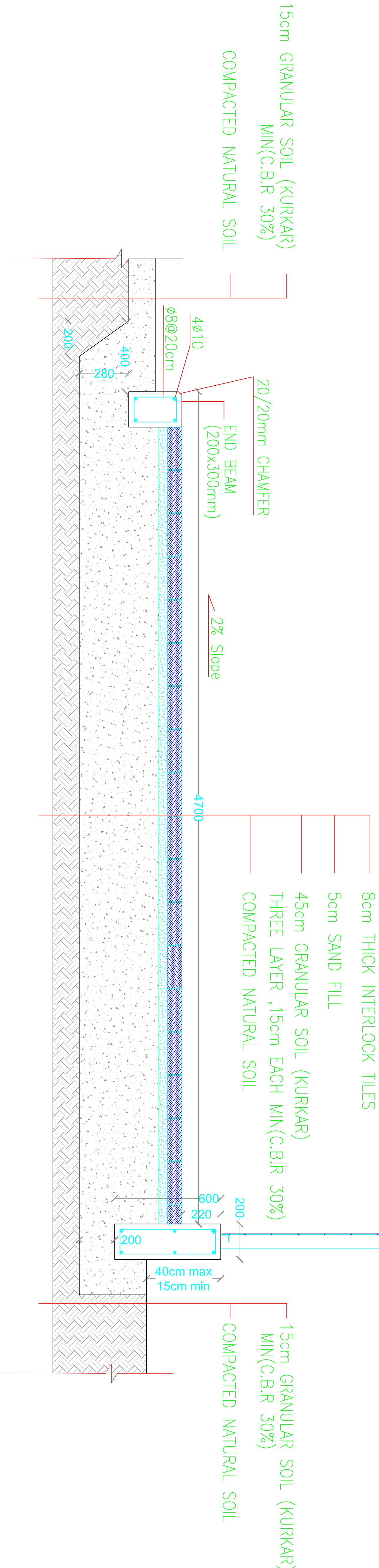
Scale:

Date: MAY, 2020



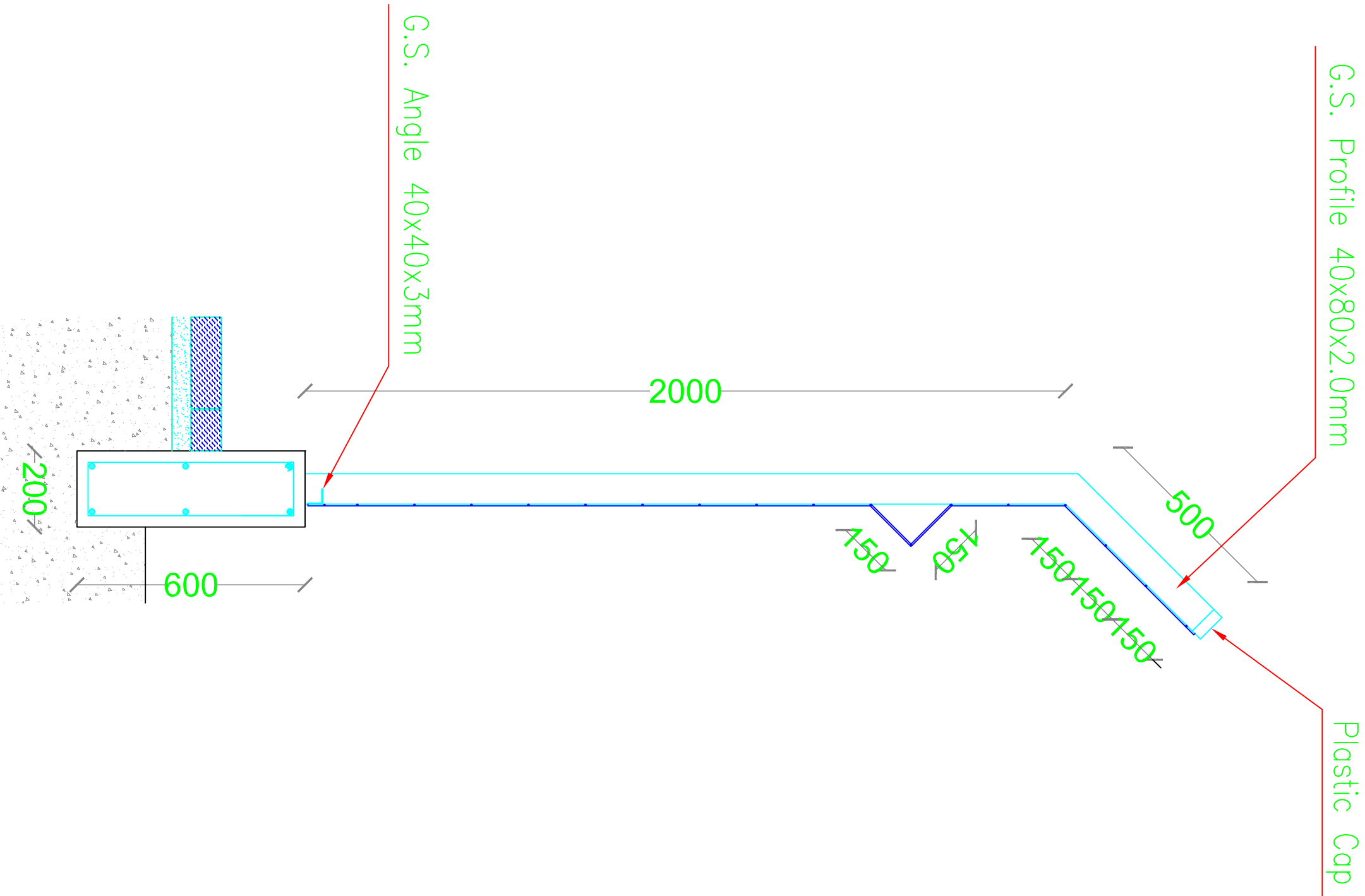
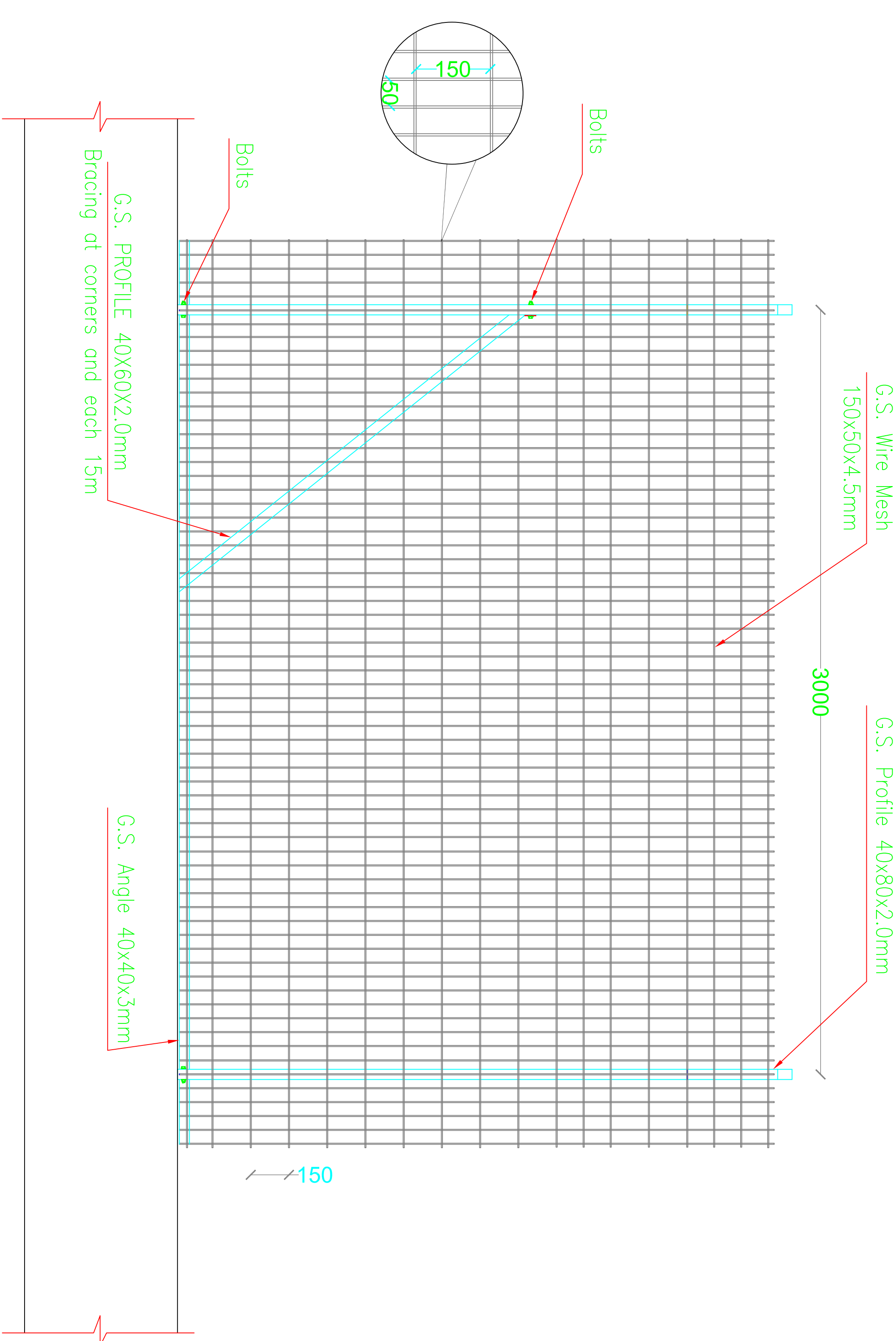


Section 1-1
1:25



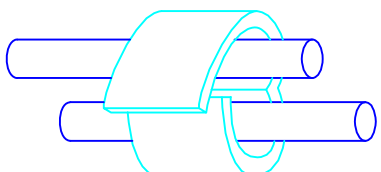
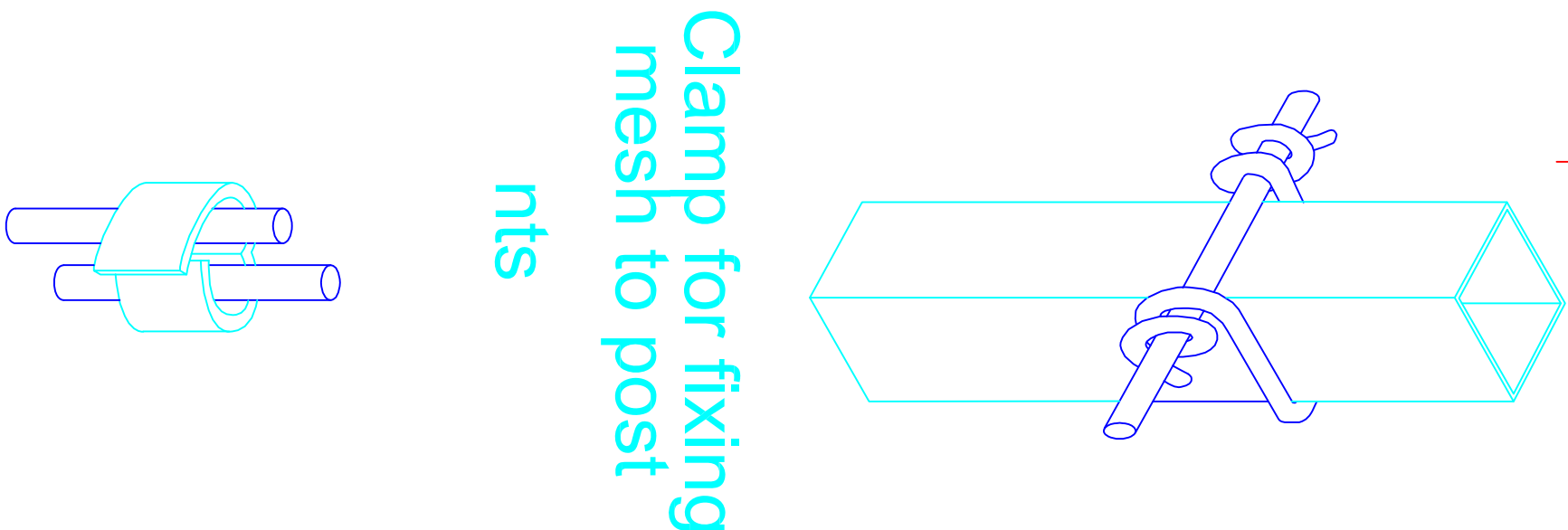
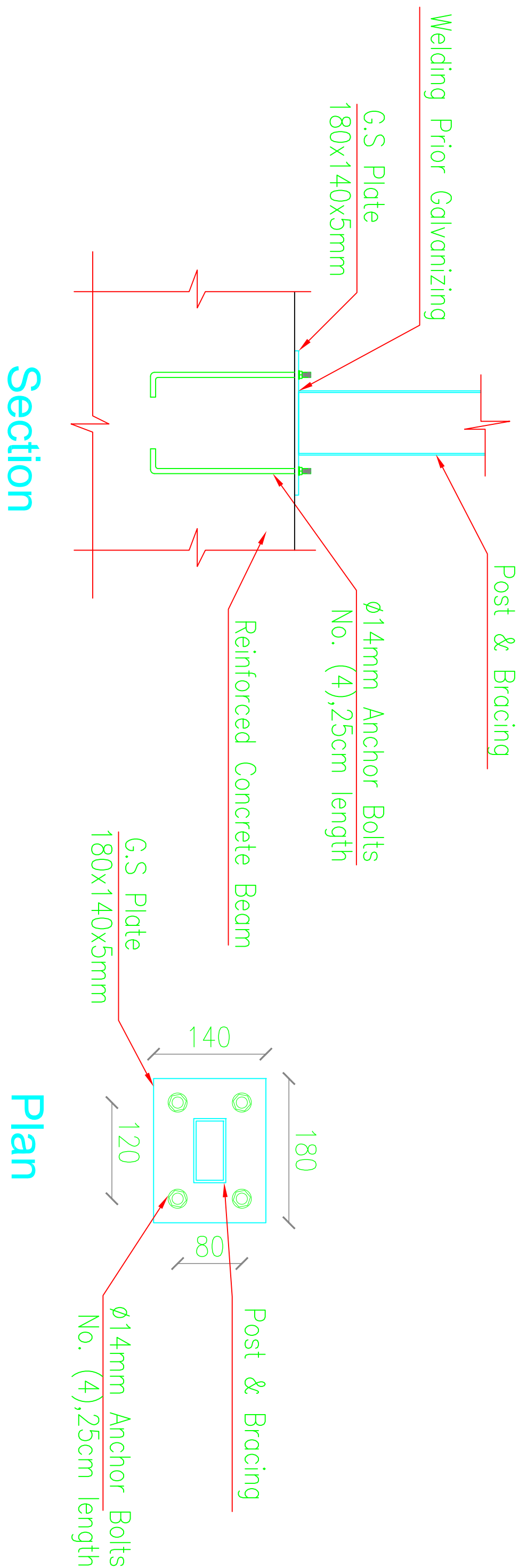
Section 2-2
1:25

Notes:	
Donor	
Norwegian Ministry of Foreign Affairs	
Norwegian Ministry of Foreign Affairs	
Client	
UN D/P	
CONSULTANT	
EMCC	
Project Name: Provision of Detailed Design and Technical Solar Energy System for Kaya Yousa Waste Water Treatment Plant (KYYWWTP)	
RFP No. : PAL-0000093741	
Drawing Title: Internal Road Details	
Design	EMCC
Checked	EMCC
Drawing NO.	L-04
Scale:	AS DRAWINGS
Date:	MAY, 2020

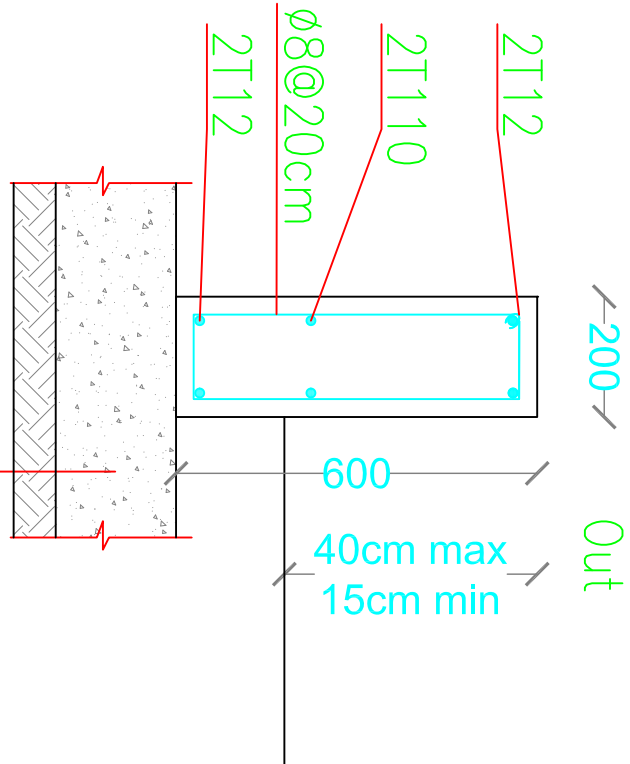


HOT-DIP Galvanized Steel Fence Elevation

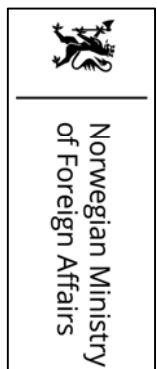
1:25



15cm GRANULAR SOIL (KURKAR)
MIN(C.B.R 80%)
COMPACTED NATURAL SOIL



CONSULTANT



Norwegian Ministry of Foreign Affairs

Client

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Notes:

Project Name: Provision of Detailed Design and Technical Support for the Implementation of the Solar Energy System for Rural Villages Waste Water Treatment Plant (K.V. WWTP)	
RFP No. :	PAL-0000093741
Drawing Title:	Fence Details
Design	EMCC

Checked	EMCC
Drawing NO.	L-05
Scale:	AS DRAWINGS
Date:	MAY, 2020

Post and Bracing Base Connection

1:10

Typical Fence Beam

1:25

Notes:

Donor



Norwegian Ministry of Foreign Affairs



CONSULTANT



Project Name:
Provision of Detailed Design and Technical
Solar Energy System for Kibin Yousai Waste
Water Treatment Plant (KYYWWTP)

RFP No. :
PAL-0000093741

Drawing Title:

Entrance Gate Details

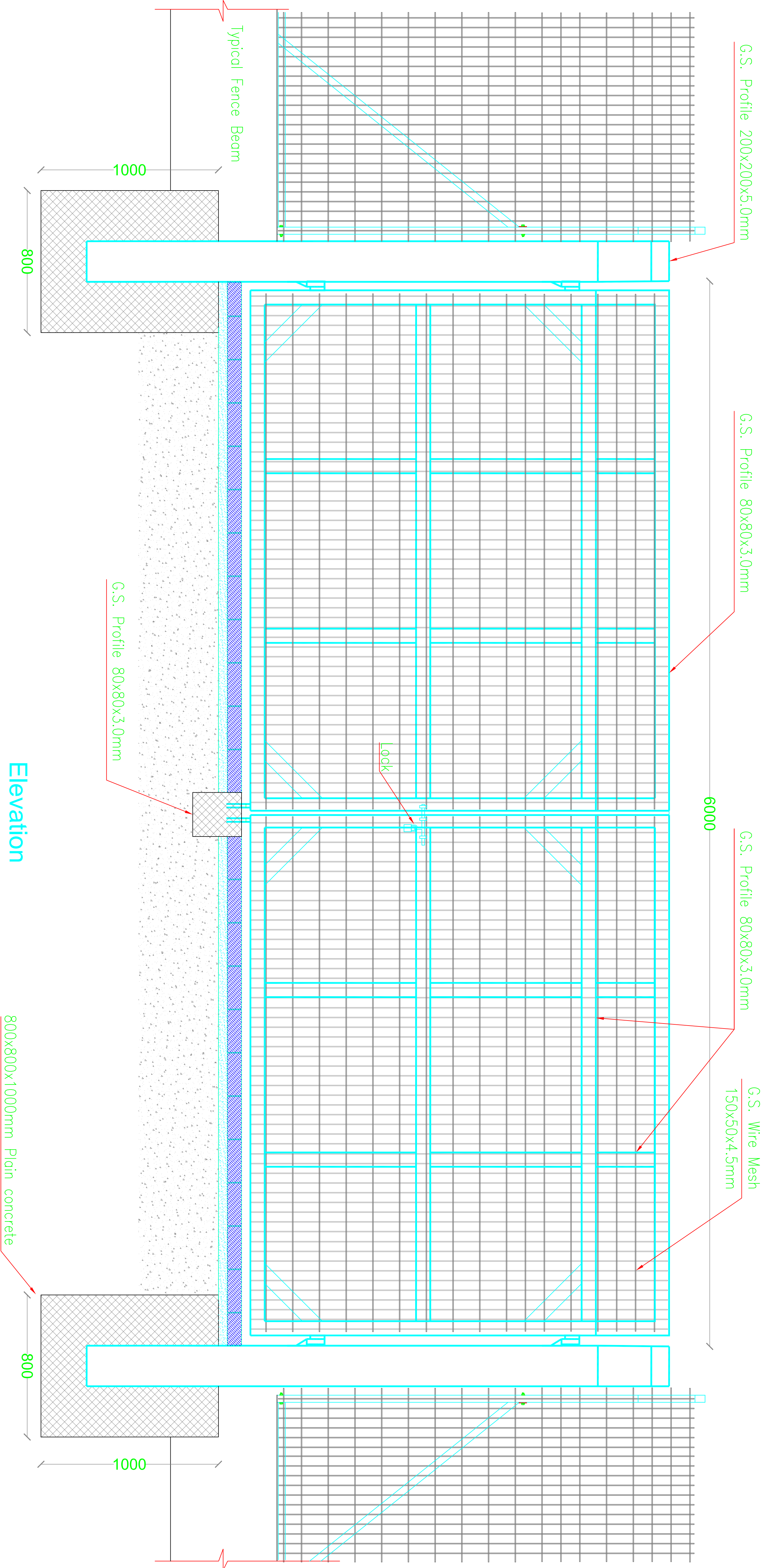
Design	EMCC
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Checked	EMCC
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Drawing NO.	L-06
-------------	------

Scale:	AS DRAWINGS
--------	-------------

Date:	MAY, 2020
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Elevation

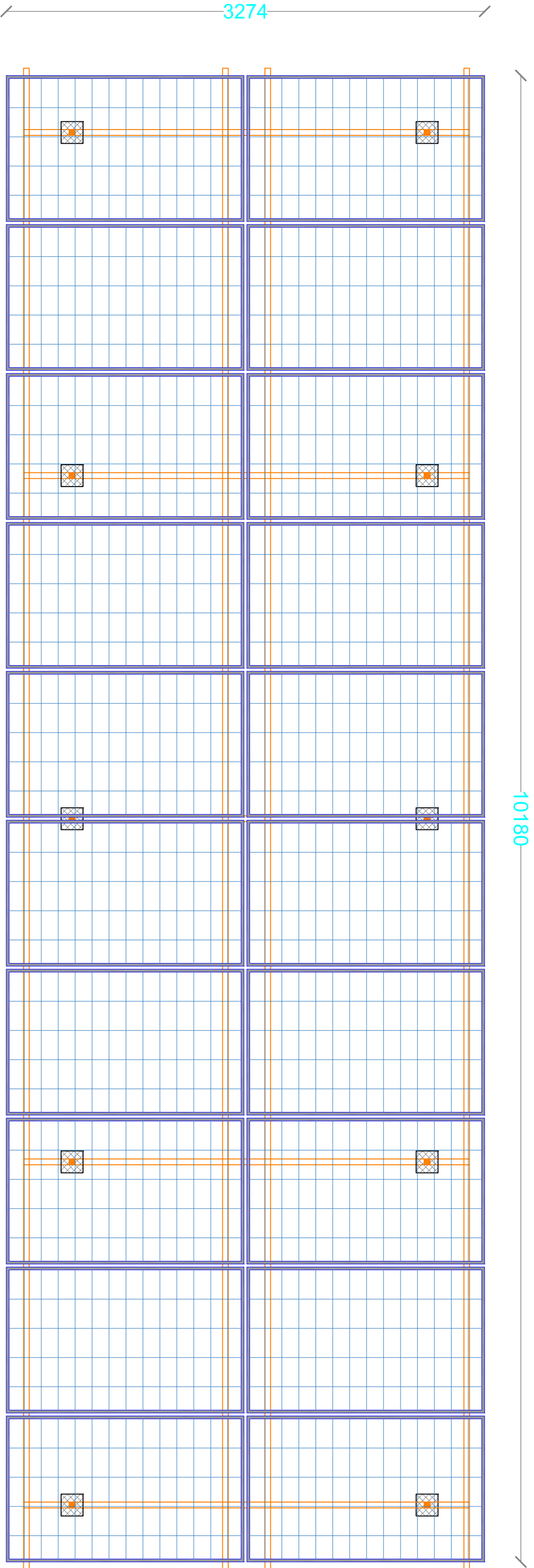
OUT

IN

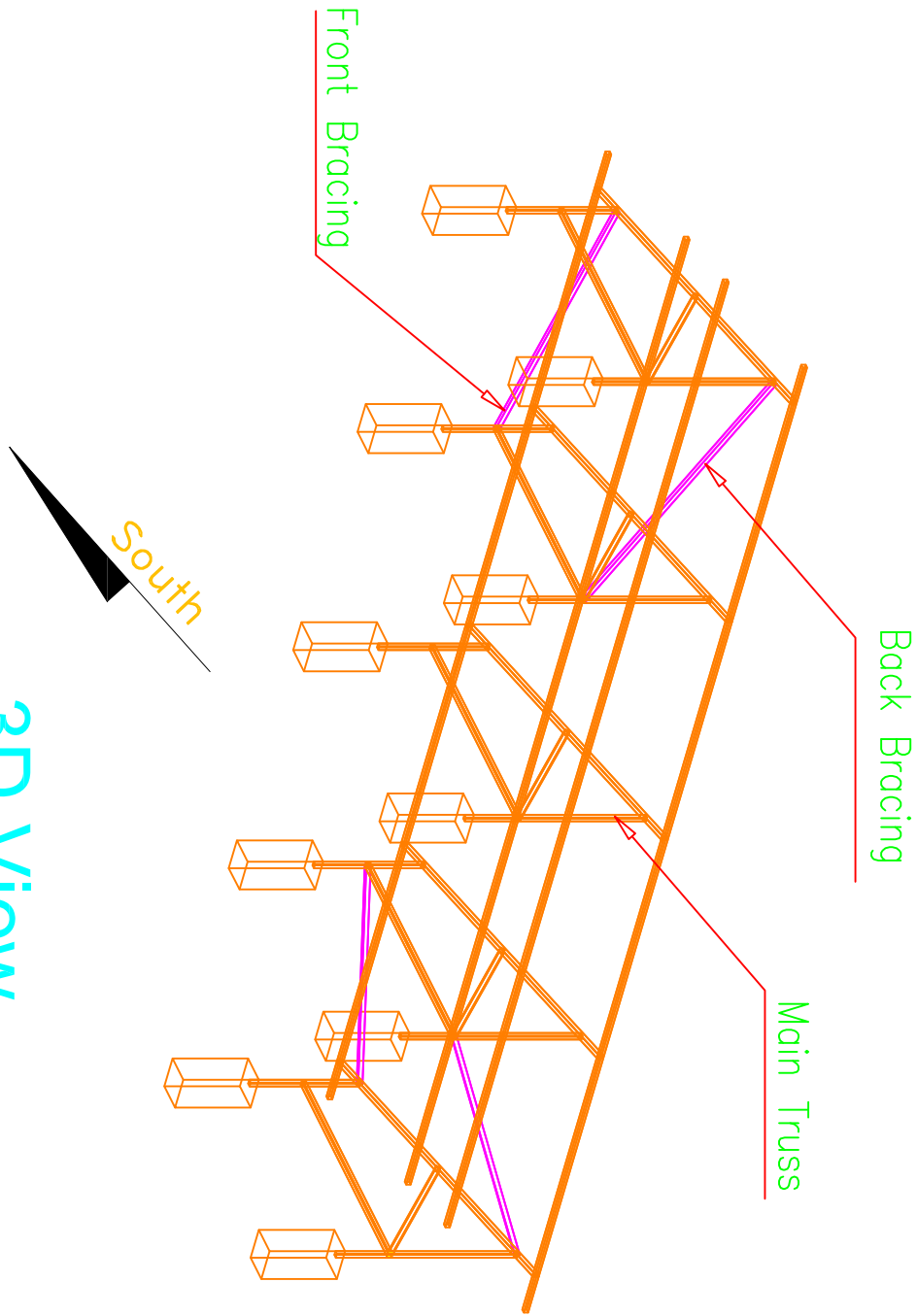
Plan

Main Entrance Gate Details

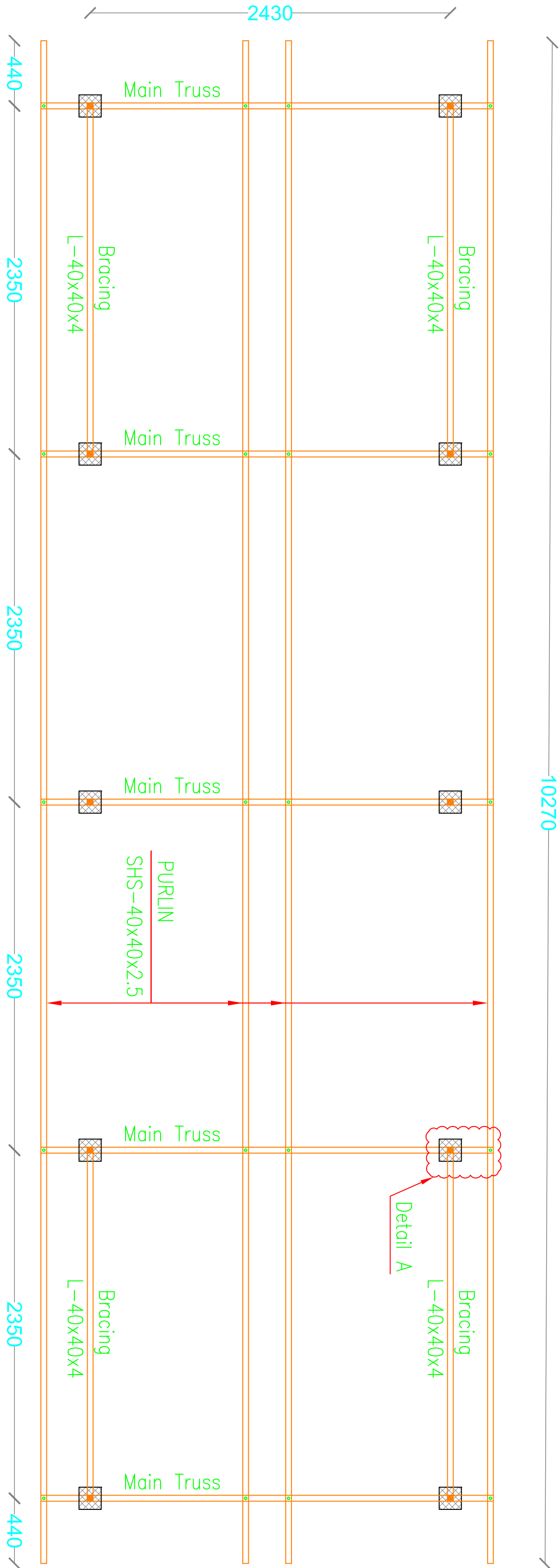
1:25



PV Arrangement Layout
1:50

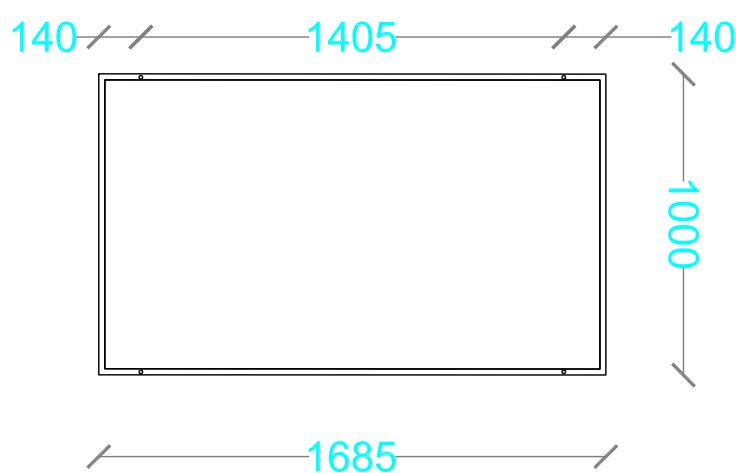


3D View
nts



Steel Structure Layout
1:50

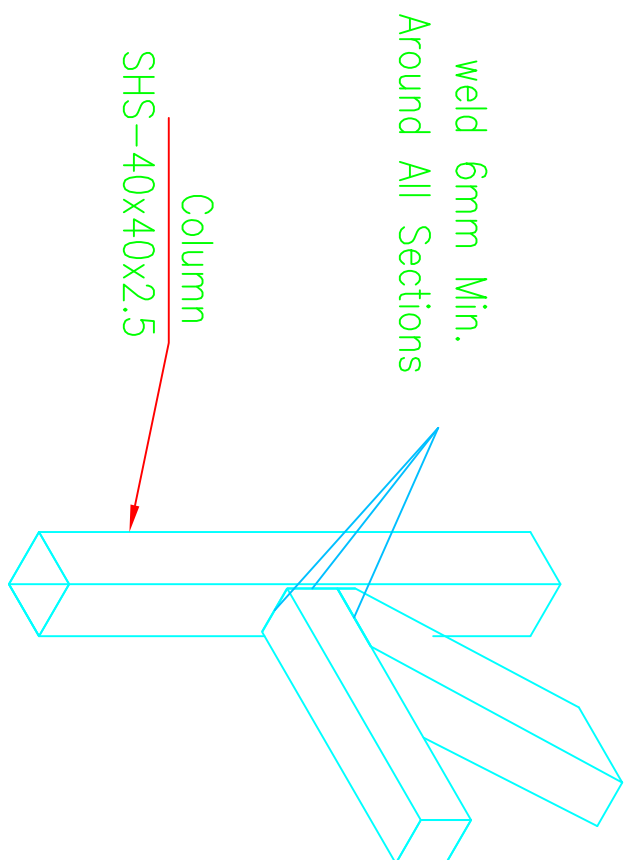
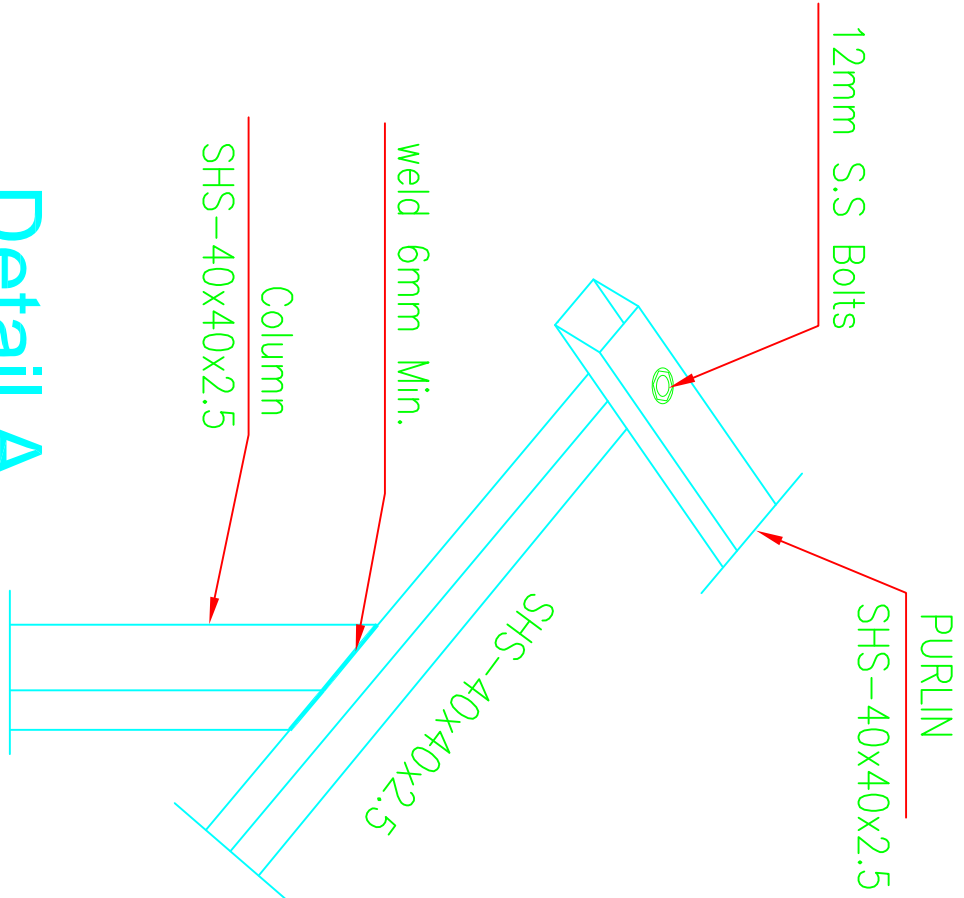
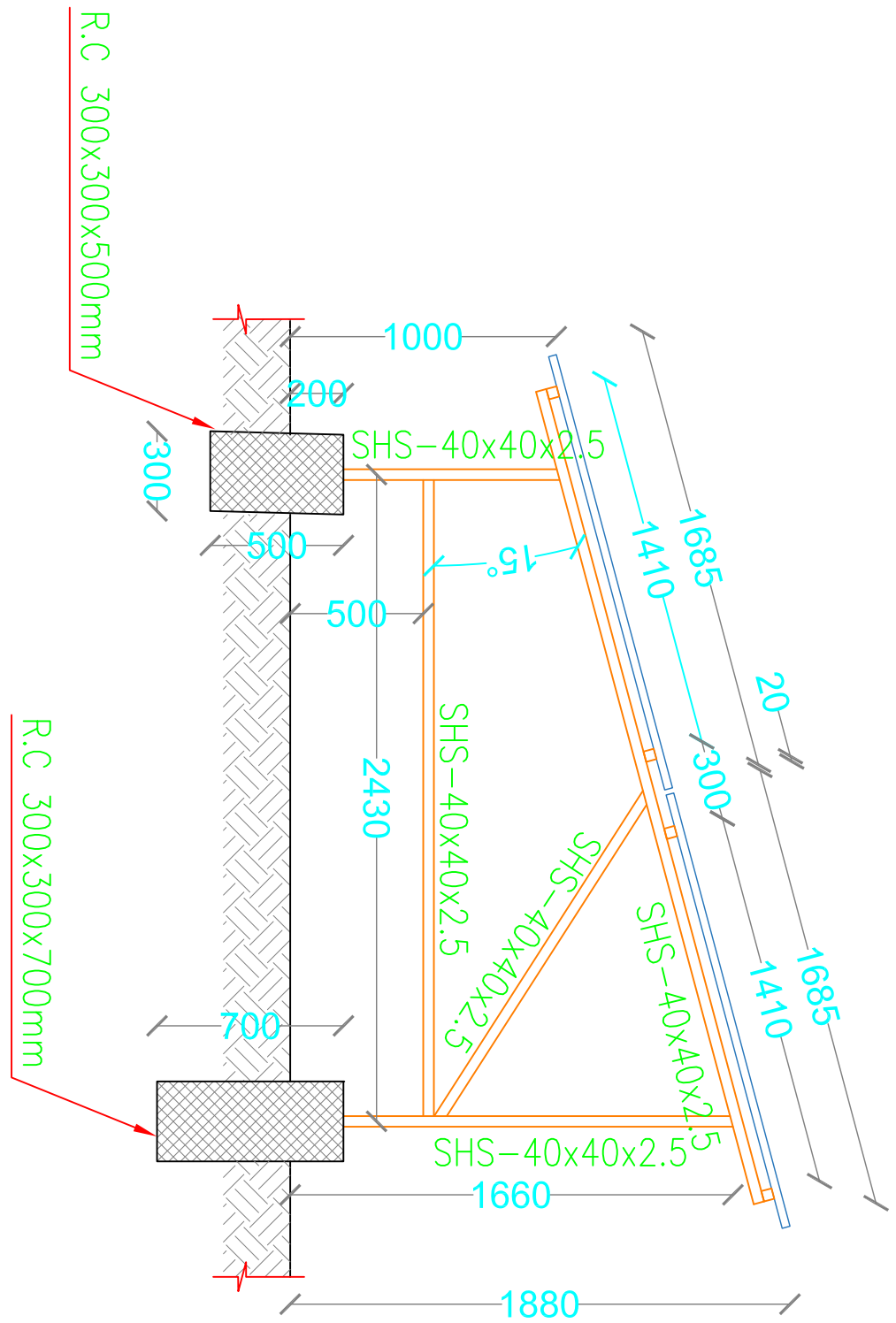
PV CLAMPS POSITION
1:50



- STEEL GENERAL NOTES:-
- 1- ALL STEEL STRUCTURE MUST HOT-DIP GALVANIZED STEEL WITH MINIMUM THICKNESS OF 60 MICRONS
 - 2- MINIMUM STEEL GRADE S275
 - 3- ALL STEEL BOLTS IS STAINLESS STEEL BOLTS 304 GRADE 4.8
 - 4-ALL WELDED AREA MUST RE-GALVANIZED
 - 5-ALL DIMENSIONS ARE IN MILLIMETER UNLESS OTHERWISE NOTED.

Notes:	
Donor	
Norwegian Ministry of Foreign Affairs	
Client	
CONSULTANT	
EMCC	
Project Name:	
Provision of Detailed Design and Technical	
Solar Energy System for Kaya Yousa Waste	
Water Treatment Plant (Kaya WWTP)	
RFP No. :	
PAL-0000093741	
Drawing Title:	
Steel Structure Unit Details-A	
Design	EMCC
Checked	EMCC
Drawing NO.	L-07
Scale:	AS DRAWINGS
Date:	MAY, 2020

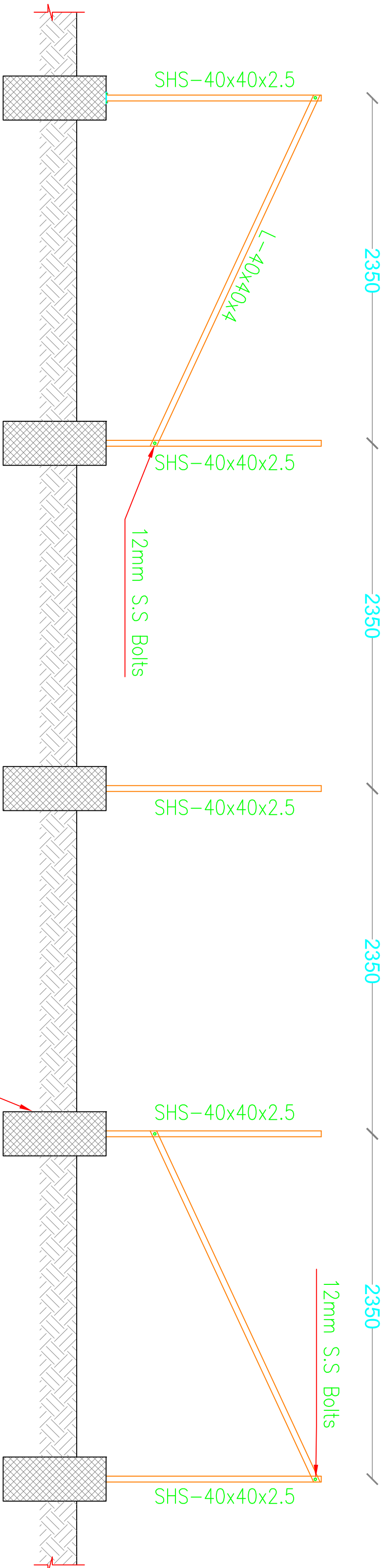
Notes:



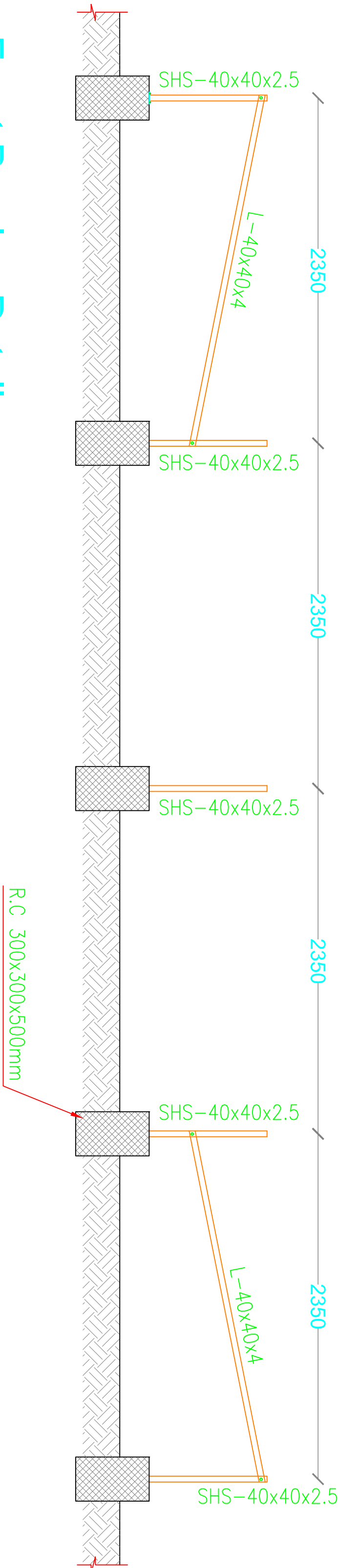
Joint Details

Main Truss Details
1:50

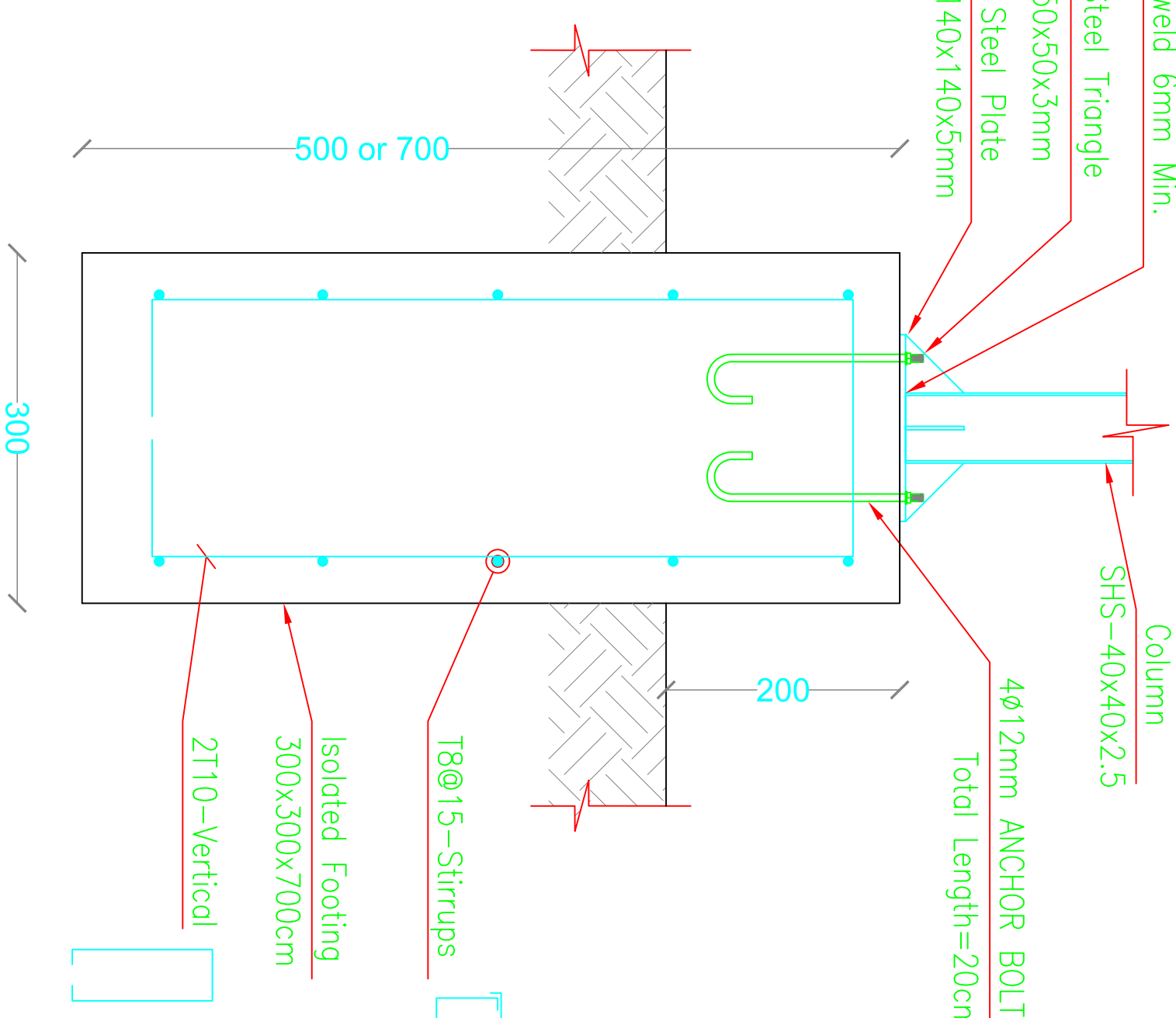
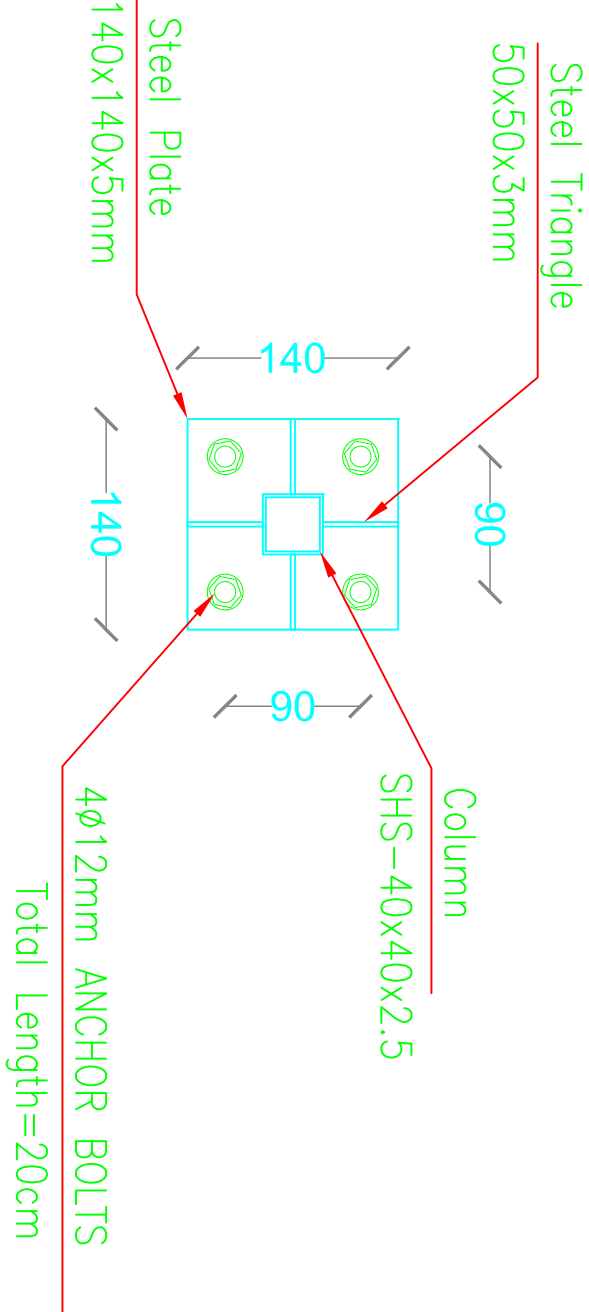
Detail A
1:10



Back Bracing Details
1:50

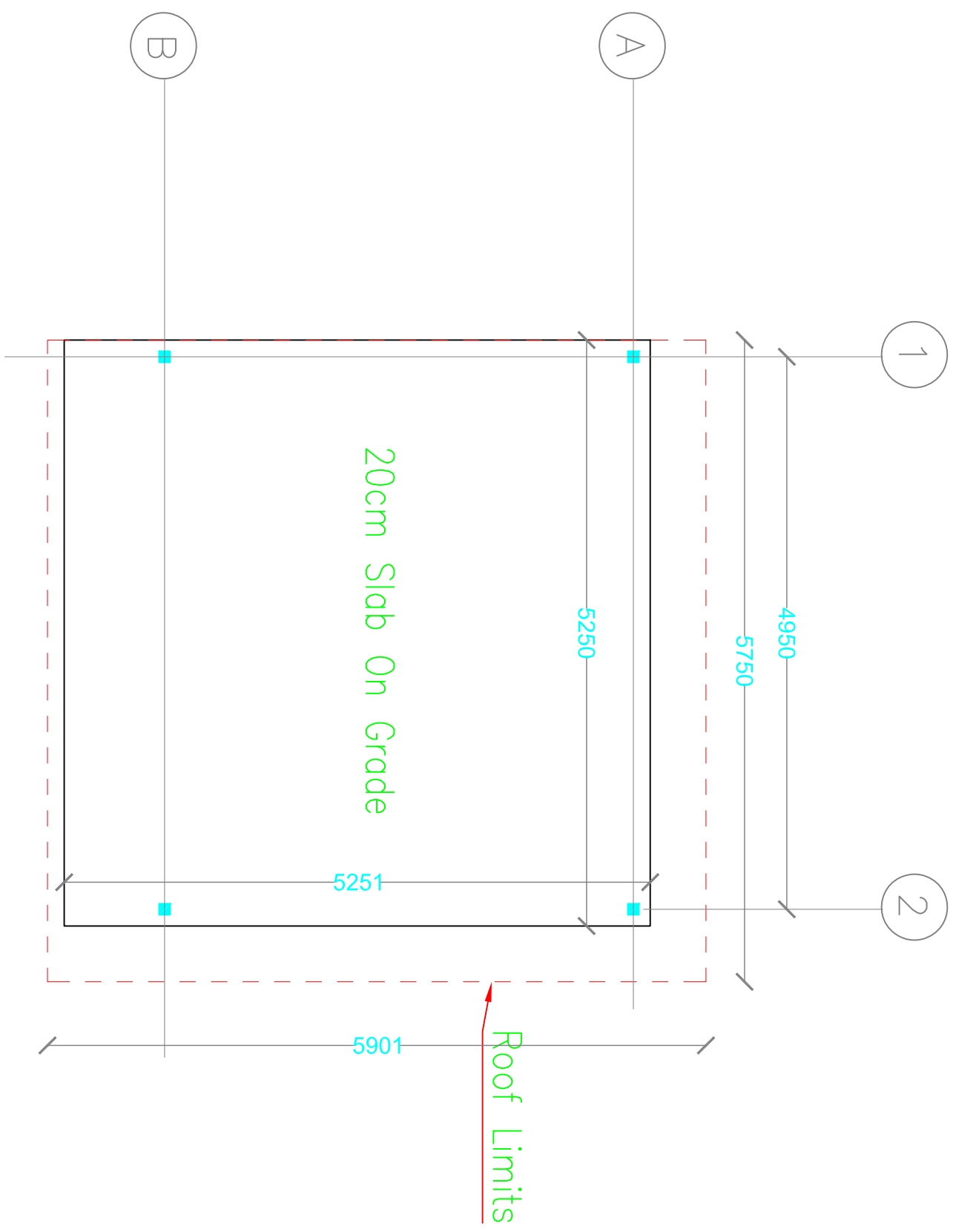


Front Bracing Details
1:50

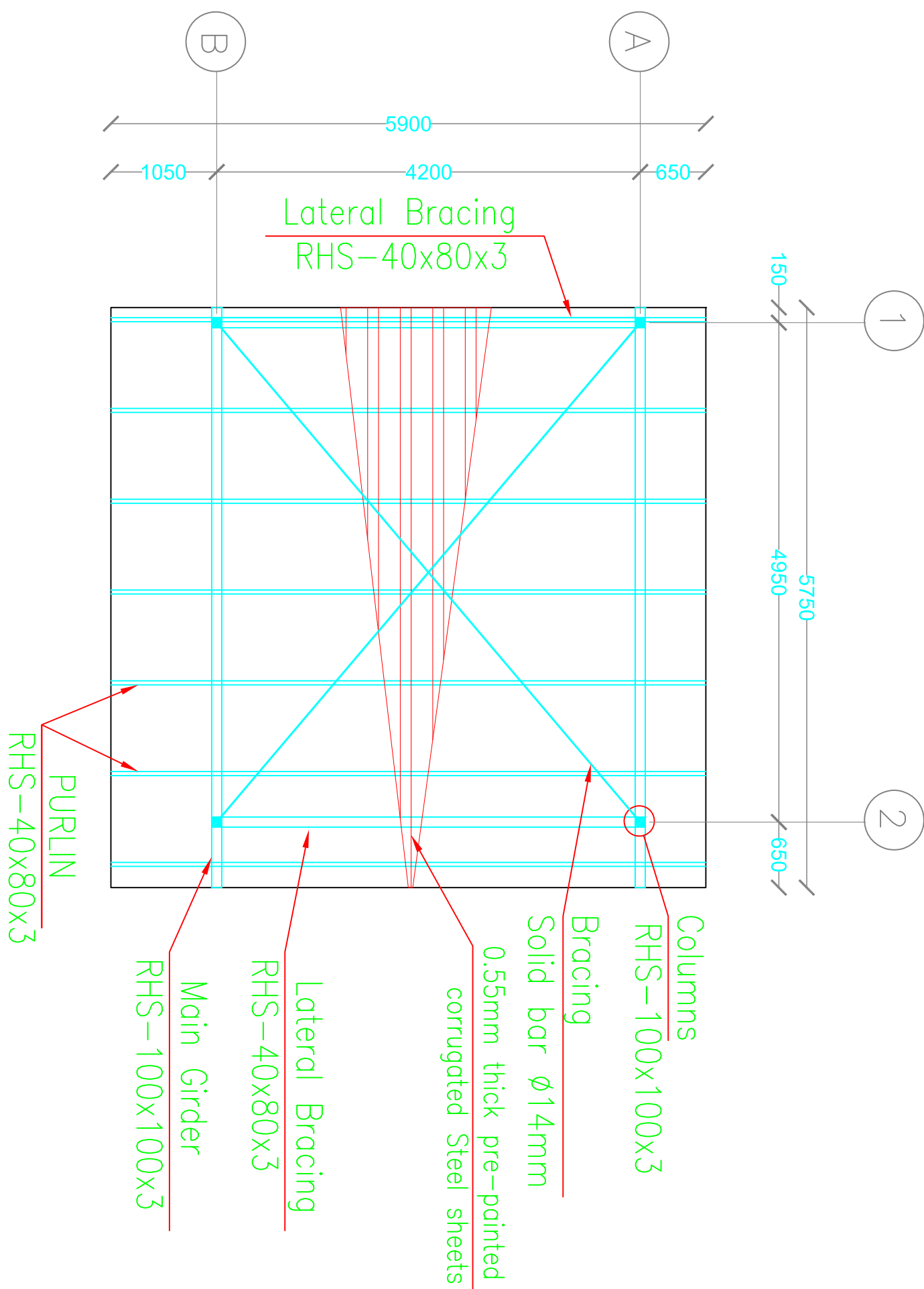


Columns Base Connection
1:10

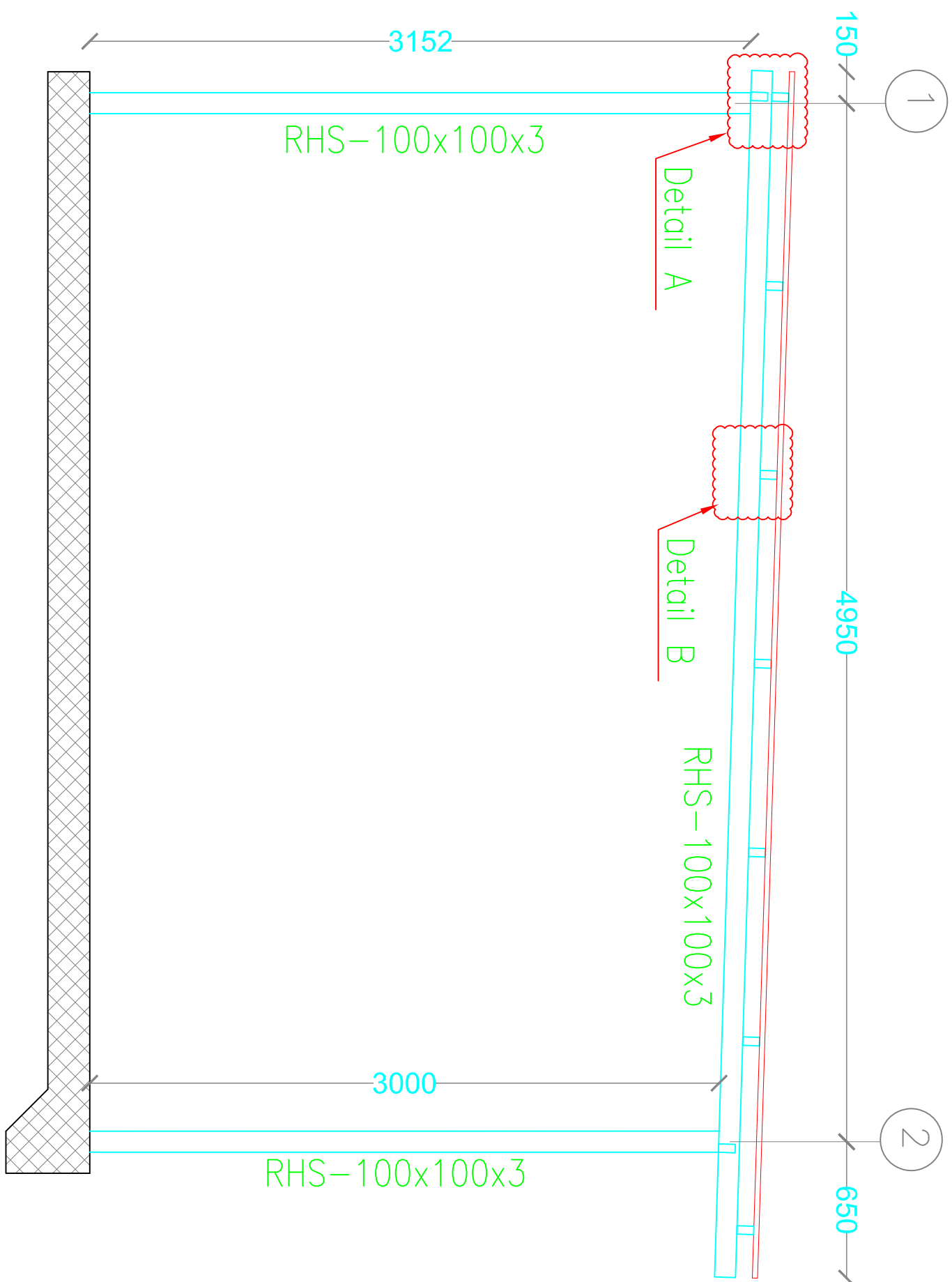
Donor	
Norwegian Ministry of Foreign Affairs	
Client	
UN D/P	
CONSULTANT	
EMCC	
Project Name:	
Provision of Detailed Design and Technical Assistance for the Development of a Solar Energy System for Rural Villages in the Water Treatment Plant (K.V. WTP)	
RFP No. :	
PAL-0000093741	
Drawing Title:	
Steel Structure Unit Details-B	
Design	EMCC
Checked	EMCC
Drawing NO.	L-08
Scale:	AS DRAWINGS
Date:	MAY, 2020



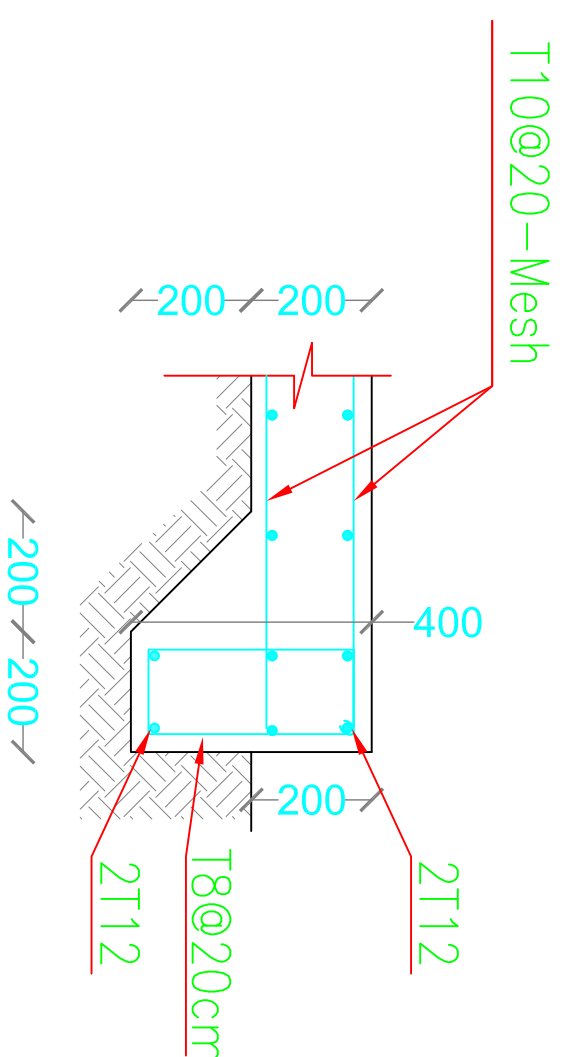
Plan
1:100



Roof Plan
1:100

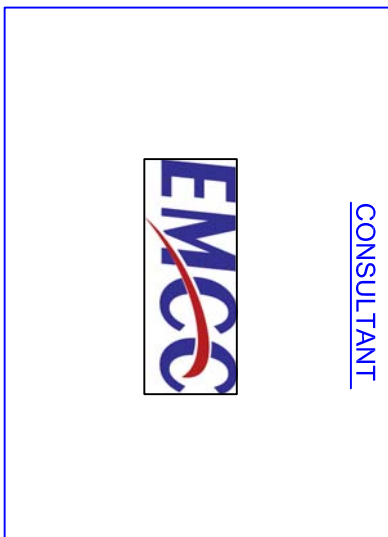
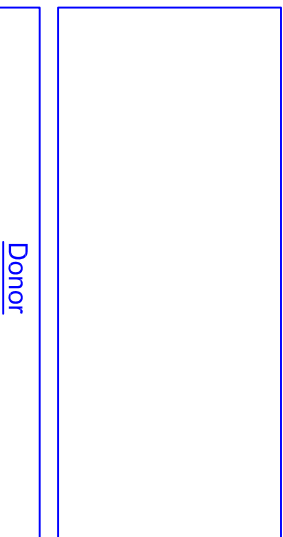


Typical Frame
1:50



Slab on Grade Details
1:100

Notes:



Project Name:
Provision of Detailed Design and Technical
Support for the Design and Construction of
Solar Energy System for Kibin Yousai Waste
Water Treatment Plant (KYN WWTTP)

RFP No. :
PAL-0000093741

Drawing Title:
Water Tanks Shed Details -A

Design
EMCC

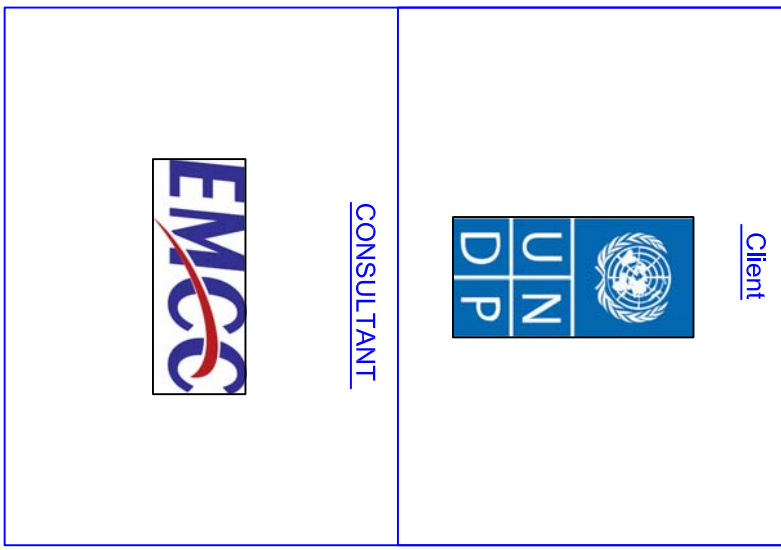
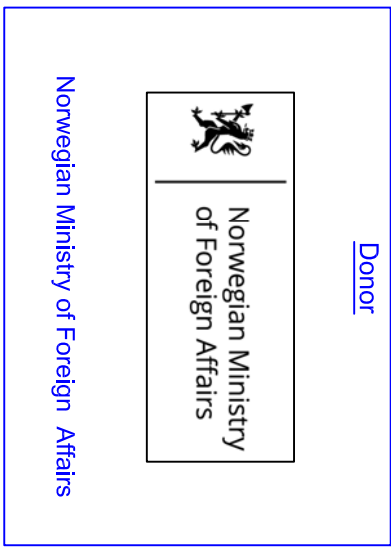
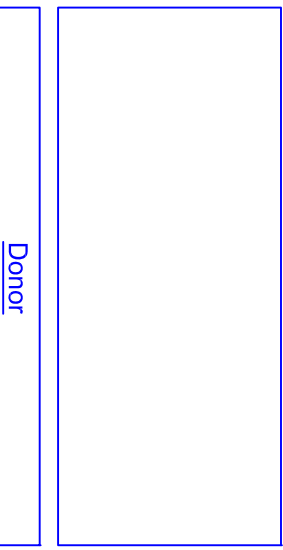
Checked
EMCC

Drawing NO.
L-09

Scale:
AS DRAWINGS

Date:
MAY, 2020

Notes:

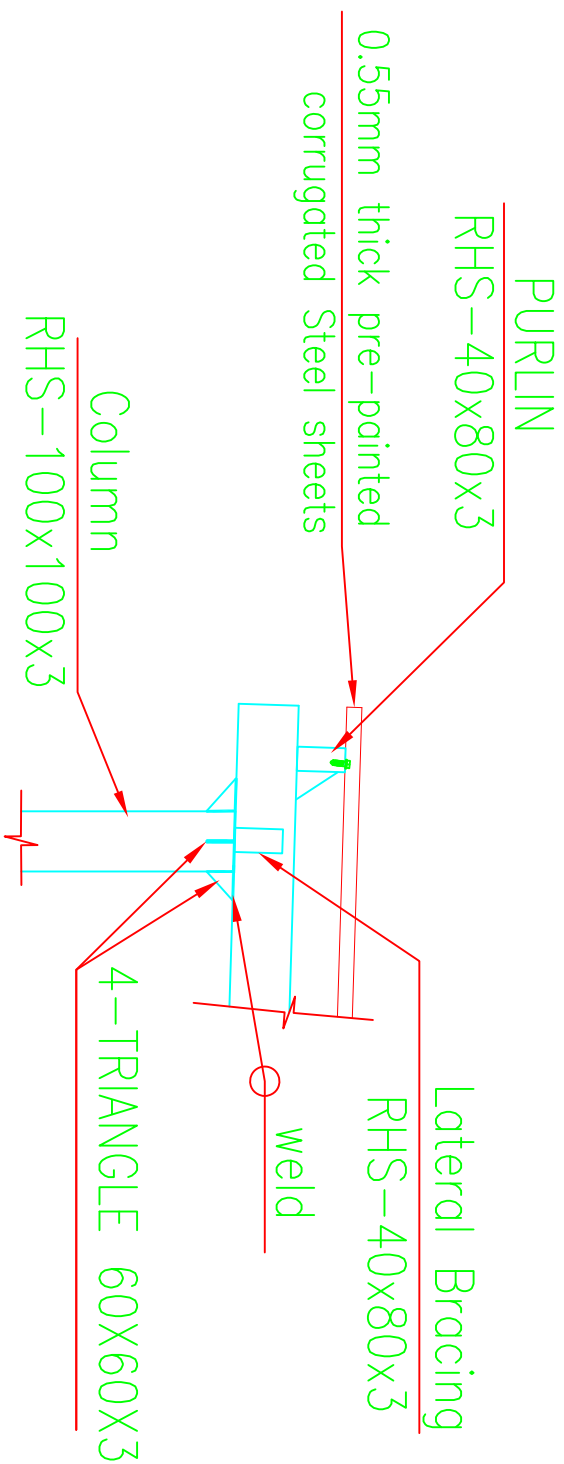


Project Name:
Provision of Detailed Design and Technical Assistance for the Rehabilitation of the Solar Energy System for Kyan Yoma's Waste Water Treatment Plant (KY WWTP)

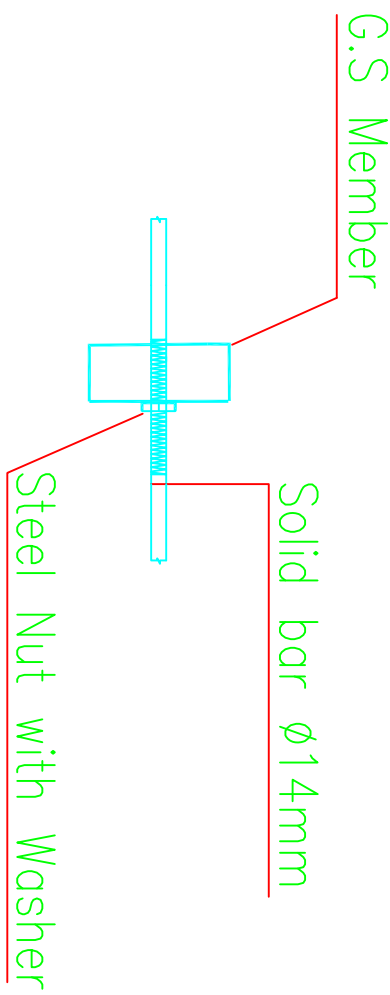
RFP No. :
PAL- 0000093741

Drawing Title:
Water Tanks Shed Details -B

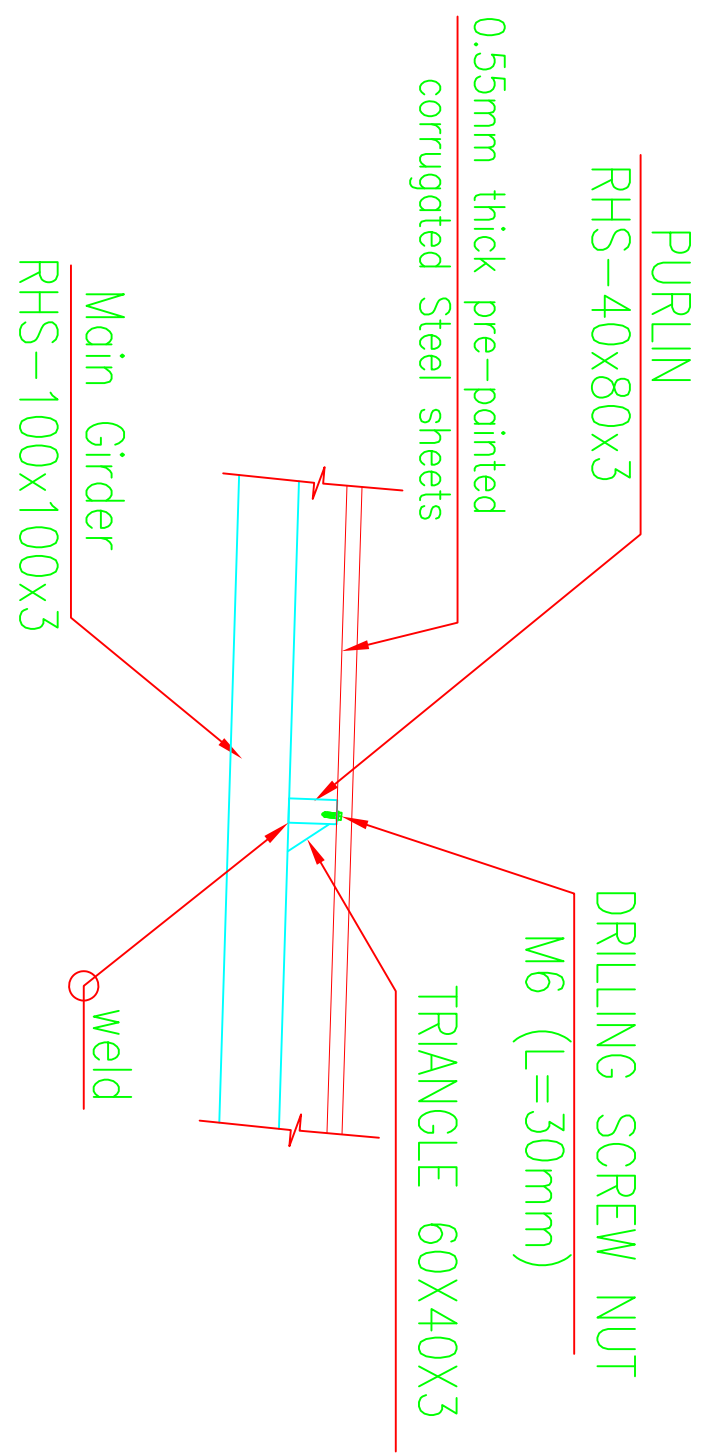
Design	EMCC
Checked	EMCC
Drawing NO.	L- 10
Scale:	AS DRAWINGS
Date:	MAY, 2020



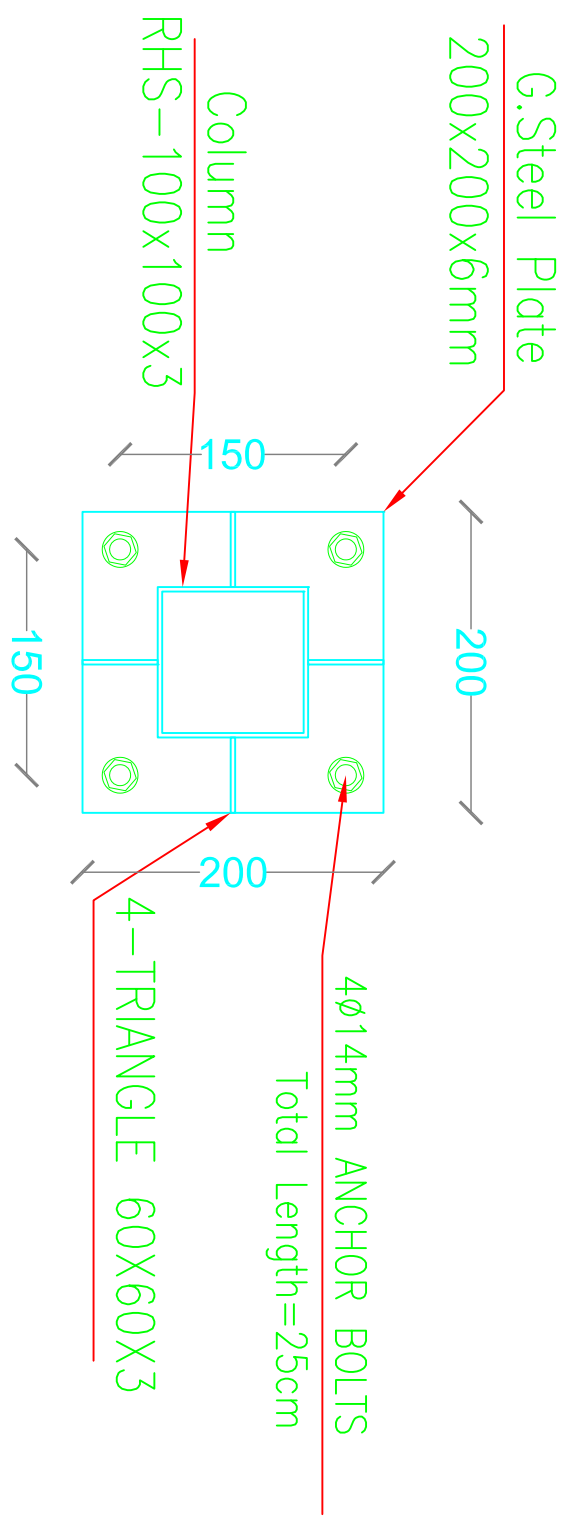
Detail A
1:25



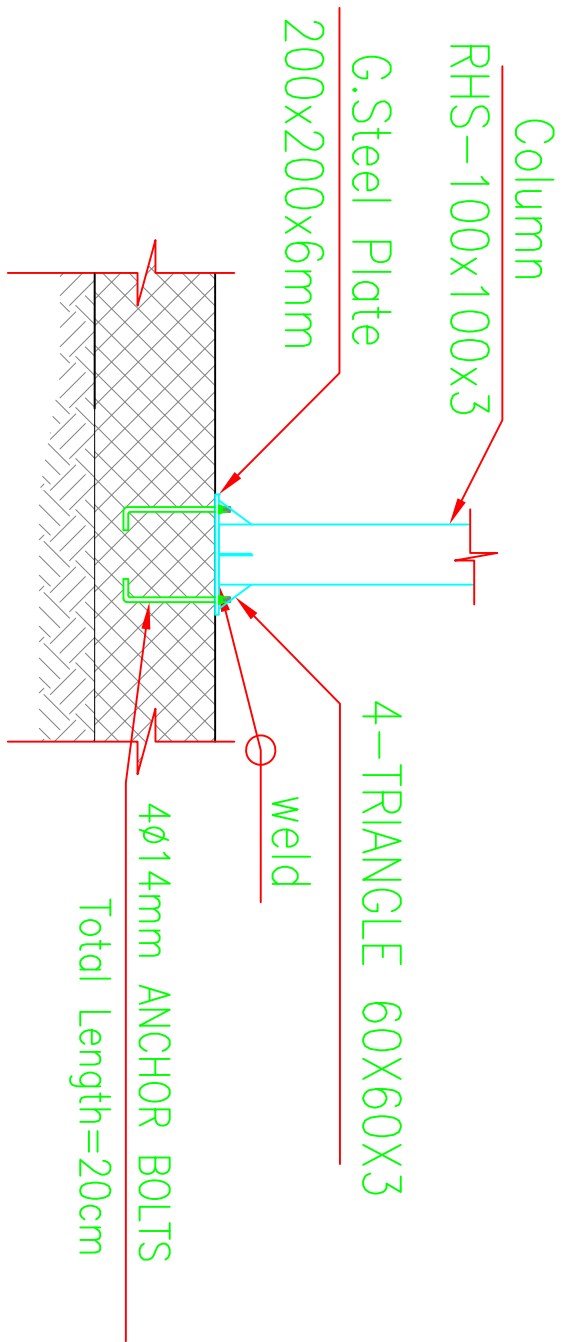
Bracing details
nts



Detail B
1:25



Plan
1:10

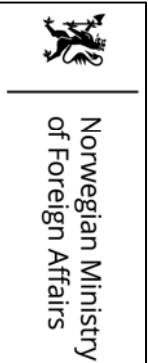


Section
1:25

Columns Base Connection

Notes:

Donor



Norwegian Ministry of Foreign Affairs

Norwegian Ministry of Foreign Affairs

Client



CONSULTANT

EMCC



Project Name:
Provision of Detailed Design and Technical Support for the Design and Construction of a Solar Energy System for Rural Youth Water Treatment Plant (CY WWTP)

RFP No. :
PAL-0000093741

Drawing Title:
Cleaning System Details

Design

EMCC

Checked

EMCC

Drawing NO.

L-11

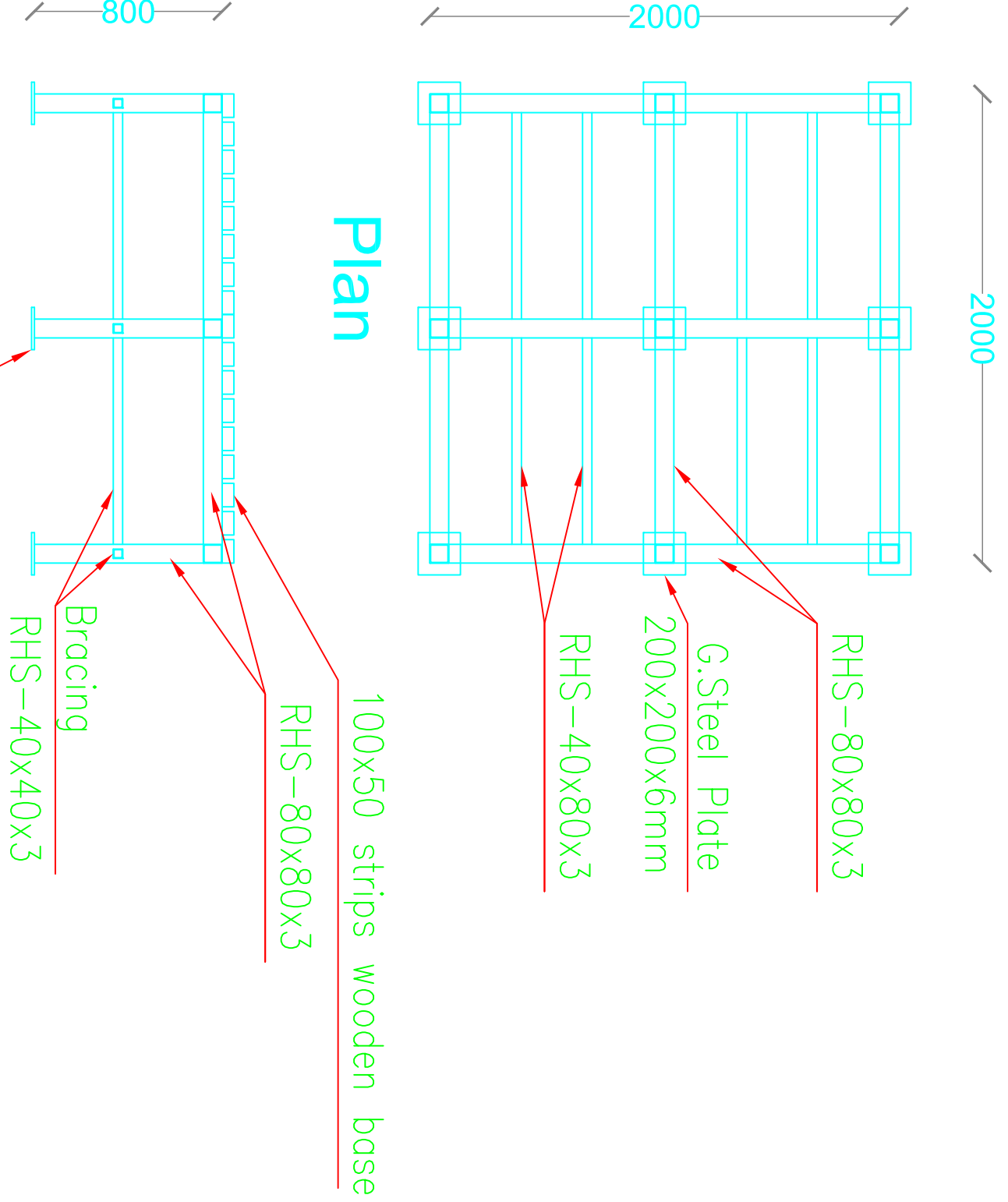
Scale:

AS DRAWINGS

Date:

MAY, 2020

Plan



2000

2000

800

100x50 strips wooden base

RHS-80x80x3

G.Steel Plate 200x200x6mm

RHS-40x80x3

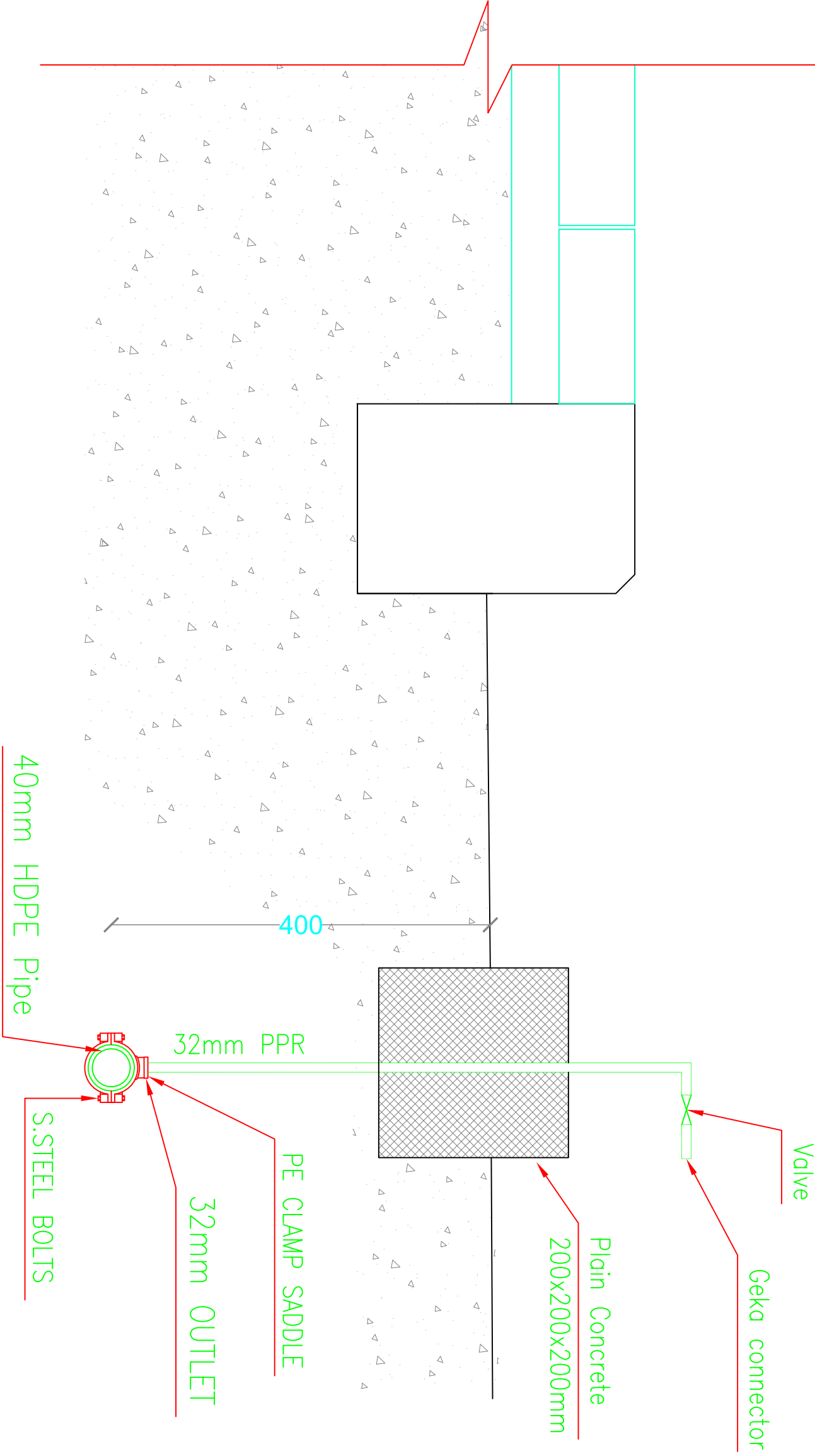
Bracing

RHS-40x40x3

G.Steel Plate 200x200x6mm

Section

Water tank holder



Valve

Geka connector

Plain Concrete 200x200x200mm

PE CLAMP SADDLE

32mm PPR

32mm OUTLET

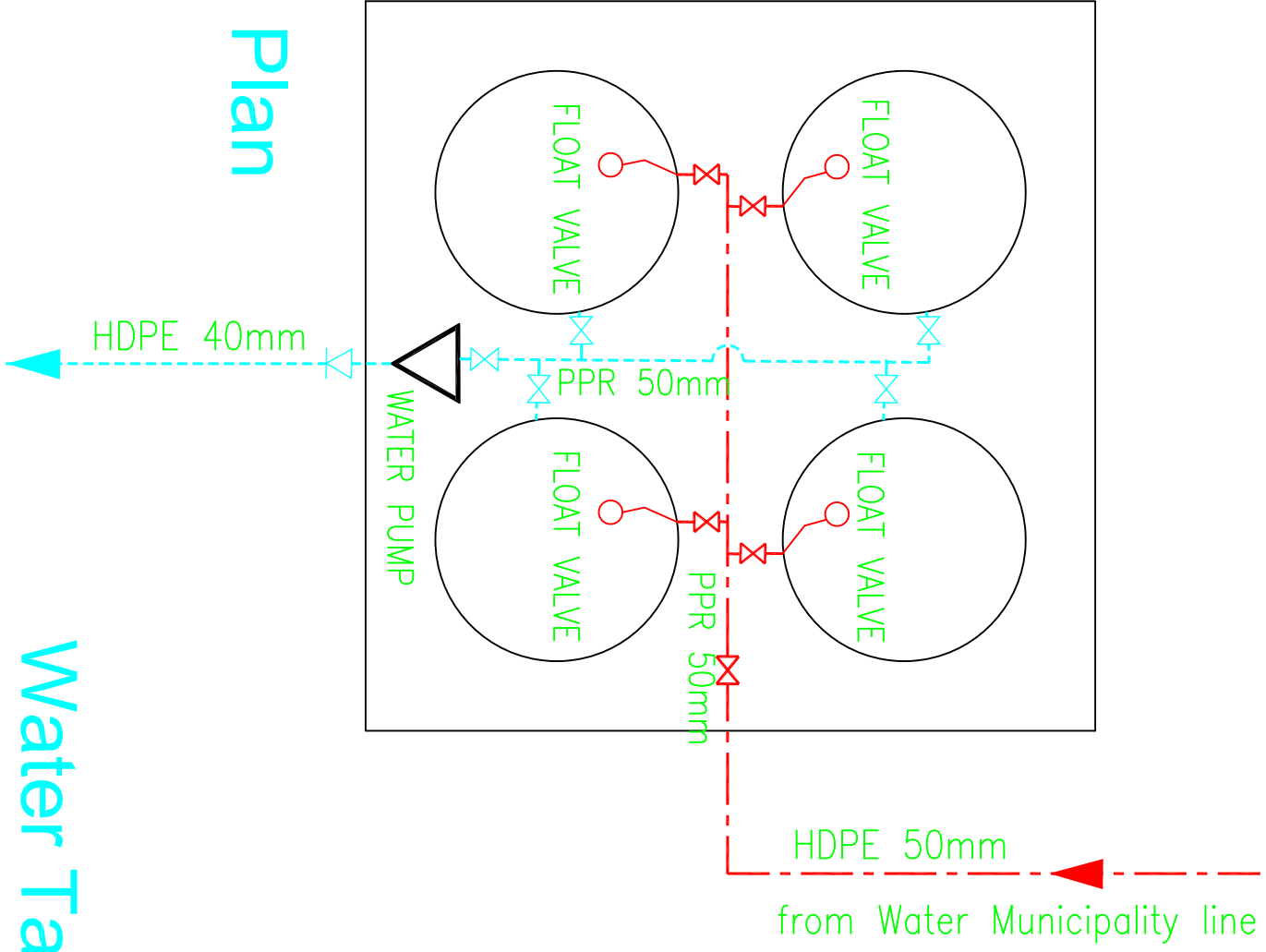
S.STEEL BOLTS

40mm HDPE Pipe

400

Connections Point Details (CP)

Plan



2000

2000

800

100x50 strips wooden base

RHS-80x80x3

G.Steel Plate 200x200x6mm

RHS-40x80x3

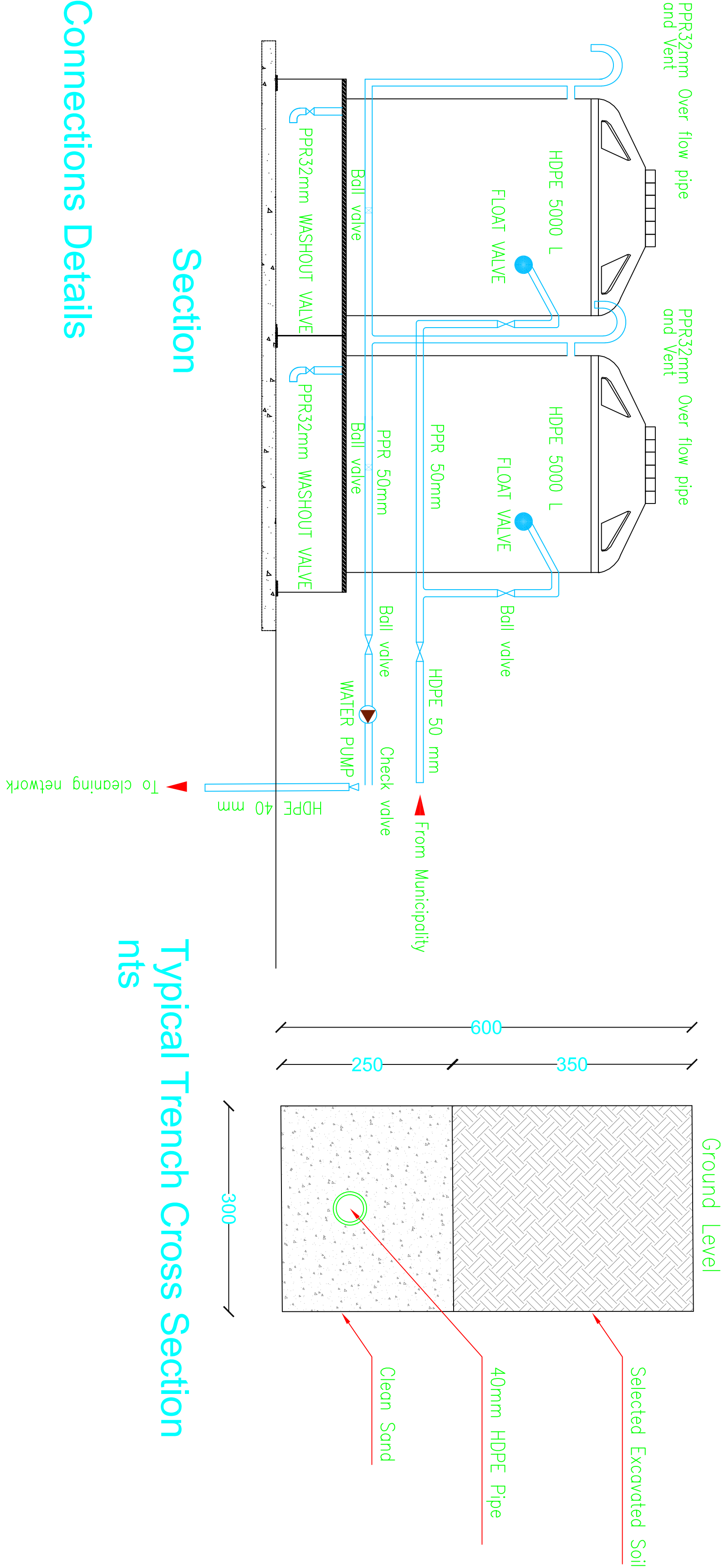
Bracing

RHS-40x40x3

G.Steel Plate 200x200x6mm

Water Tanks Connections Details

Section



PPR32mm Over flow pipe and Vent

PPR32mm Over flow pipe and Vent

HDPE 5000 L

FLOAT VALVE

PPR 50mm

PPR32mm WASHOUT VALVE

Ball valve

HDPE 50 mm

Check valve

WATER PUMP

HDPE 40 mm

To cleaning network

From Municipality

600

350

250

300

Ground Level

Selected Excavated Soil

40mm HDPE Pipe

Clean Sand

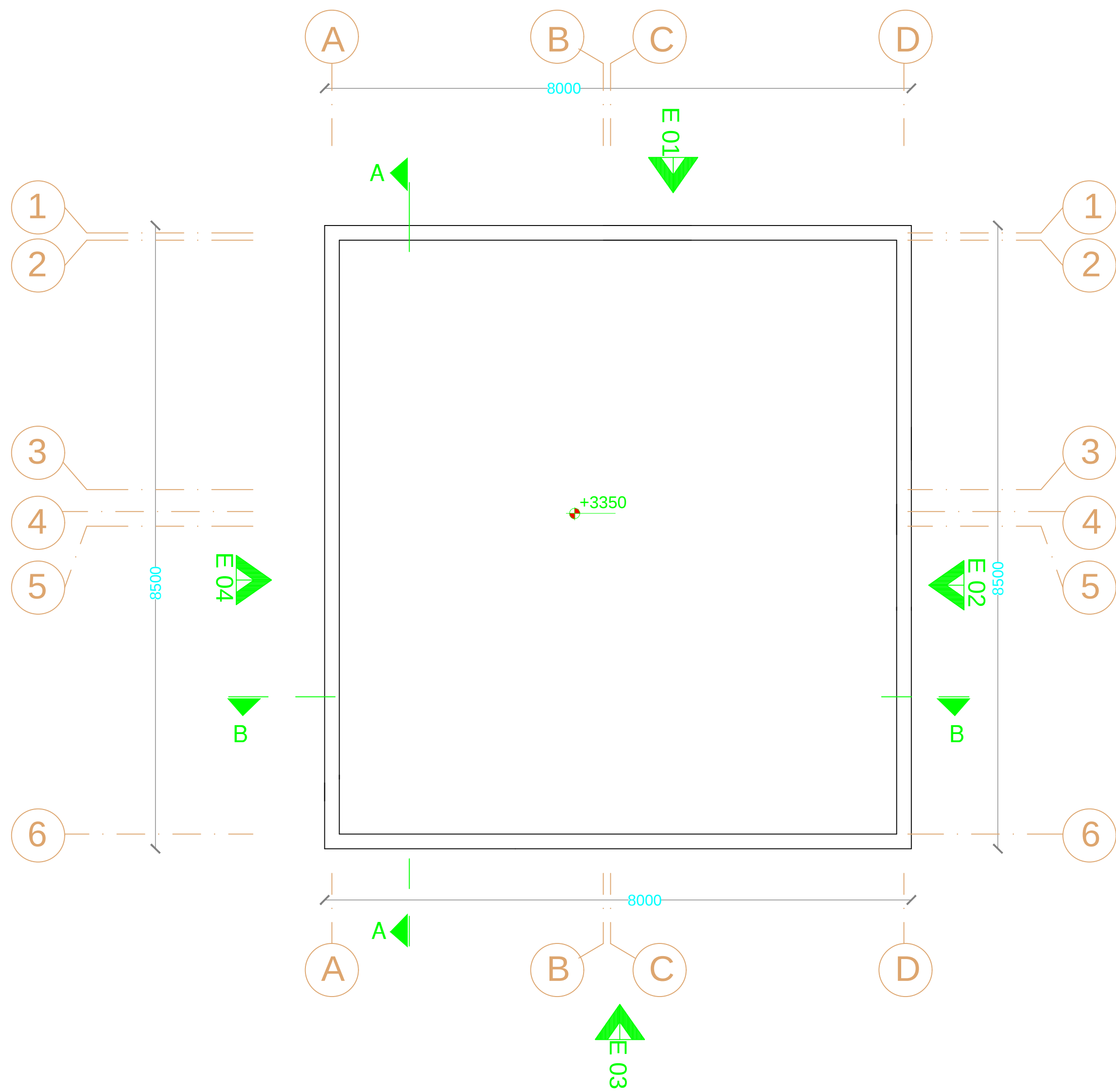
Typical Trench Cross Section

Transformer Room

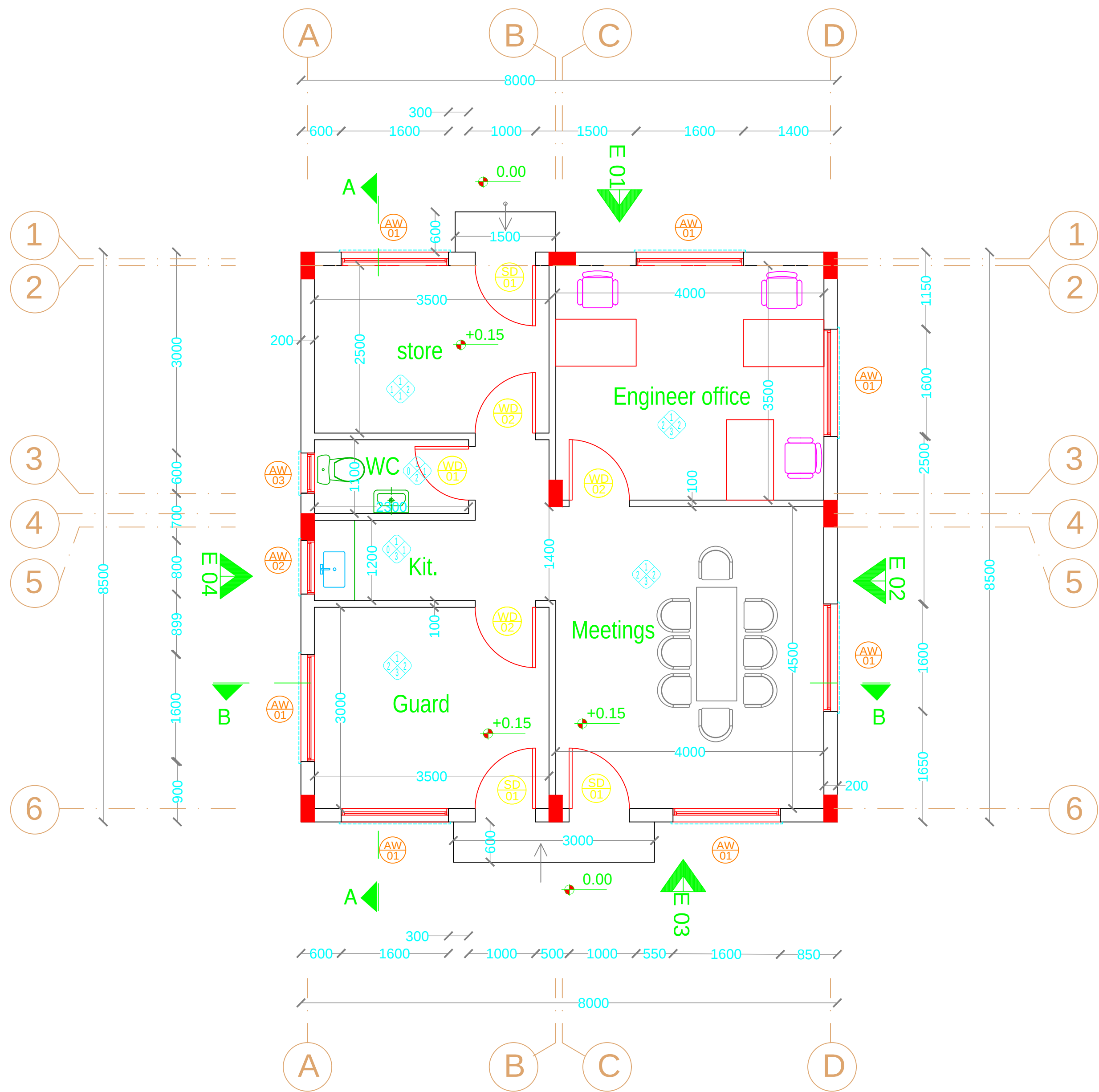
DRAWING NAME		DRAWING NO.
Ground Floor Plan		TR - 01
Elevations & Sections		TR - 02
		TR - 03
		TR - 04
		TR - 05
Fire & Rainwater Drainage Plan		TR - 06
Electrical Drawings		TR - 07
Details - 1		TR - 08
Details - 2		TR - 09
Details - 3		

Admin Building Drawings

DRAWING NAME	DRAWING NO.
ARCHITECTURE DRAWINGS	AD -01
ARCHITECTURE DRAWINGS	AD -02
STRUCTURAL DRAWINGS	AD -03
STRUCTURAL DRAWINGS	AD -04
MECHANICAL DRAWINGS	AD -05
ELECTRICAL DRAWINGS	AD -06
WINDOWS DETAILS	AD -07
WOOD DETAILS	AD -08
WOOD DOOR DETAILS	AD -09
STEEL DOOR SEEPAGE PIT DETAILS	AD -10
DOORS AND WINDOWS TABLE &DETAILS	AD -11
GENERAL DETAILS	AD -12

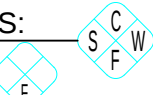


Roof Floor

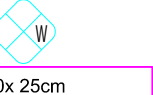


Ground Floor

Notes:

TABLE OF FINISHES:	
FLOORS:	
1	Terrazzo tiles 30x30cm
2	Non slip ceramic tiles 30x30 cm Spanish or equivalent (Class A).
3	Porcelain tiles 40x40 cm Spanish or equivalent (Class A).
4	Light weight insulation concrete Bitumen Membrane 4mm thick

CEILING:	
1	Plaster & Paint (Supercryle Paint)

WALLS:	
1	Glazed Ceramic Tile 40x 25cm up to 220cm Spanish or equivalent (Class A).
2	Plaster & Paint
3	PLASTER & OKOS FINISH

BASE:(SKIRTING)	
1	Terrazzo Skirting 7x25x1.5cm
2	Porcelain skirting 7x40 cm
3	Bitumen Membrane 4mm thick

Donor



Client



CONSULTANT

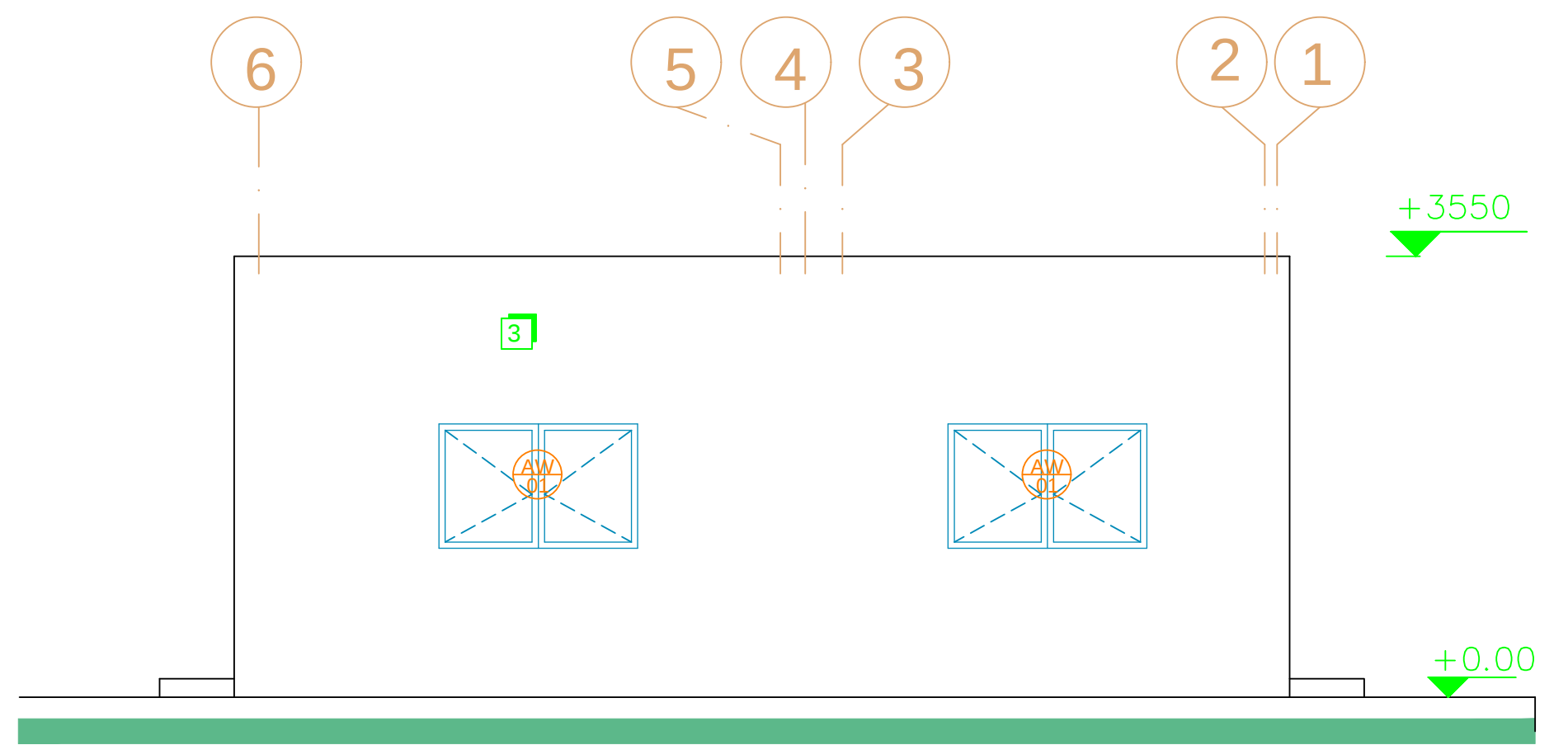


Project Name:
Provision of Detailed Design and Technical Assistance Services for the Construction of Solar Energy System for Khan Younis Waste Water Treatment Plant (KY WWTP)

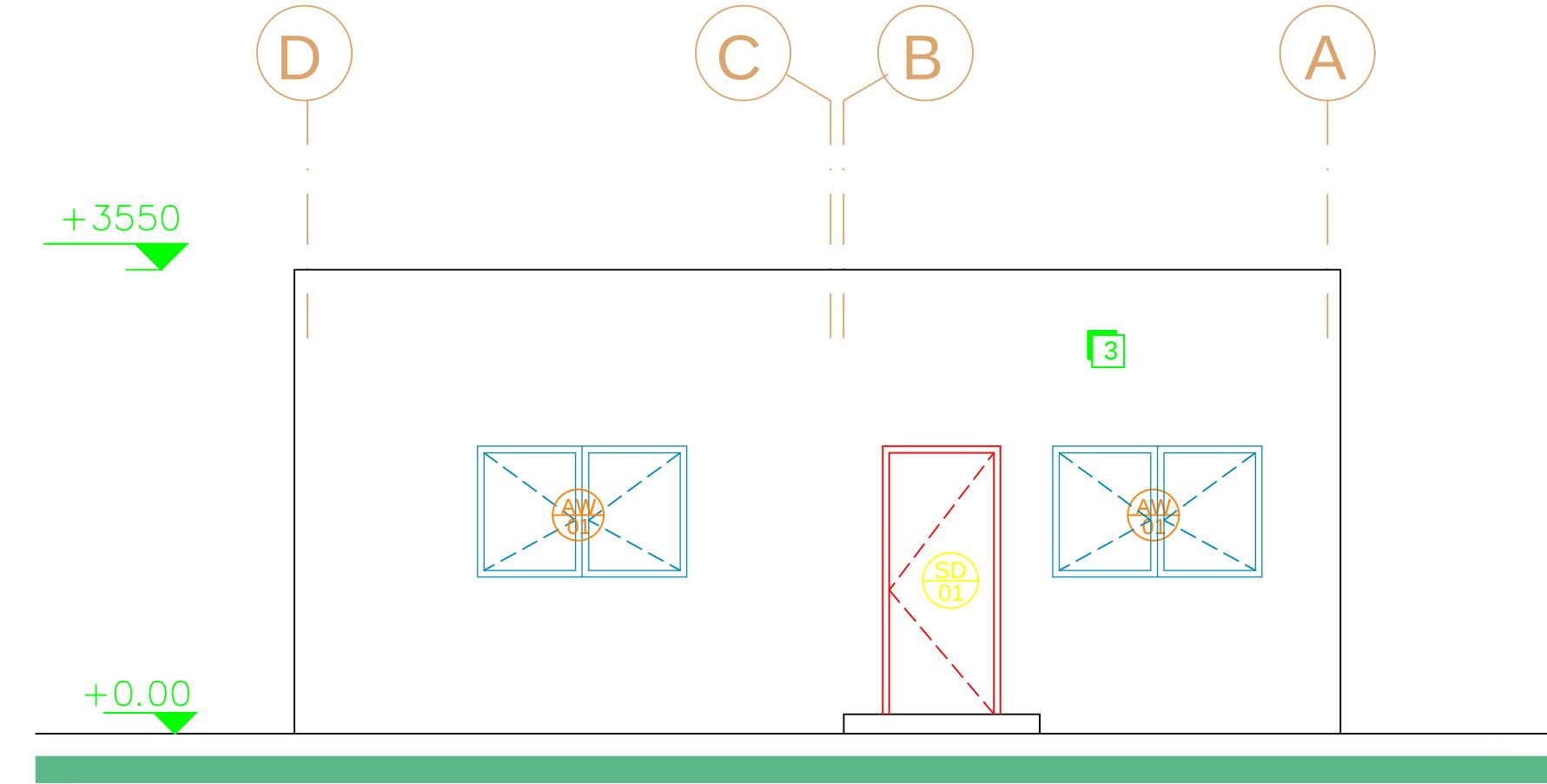
RFP No. :
PAL- 0000093741

Drawing Title: Admin Building
Architecture Drawings

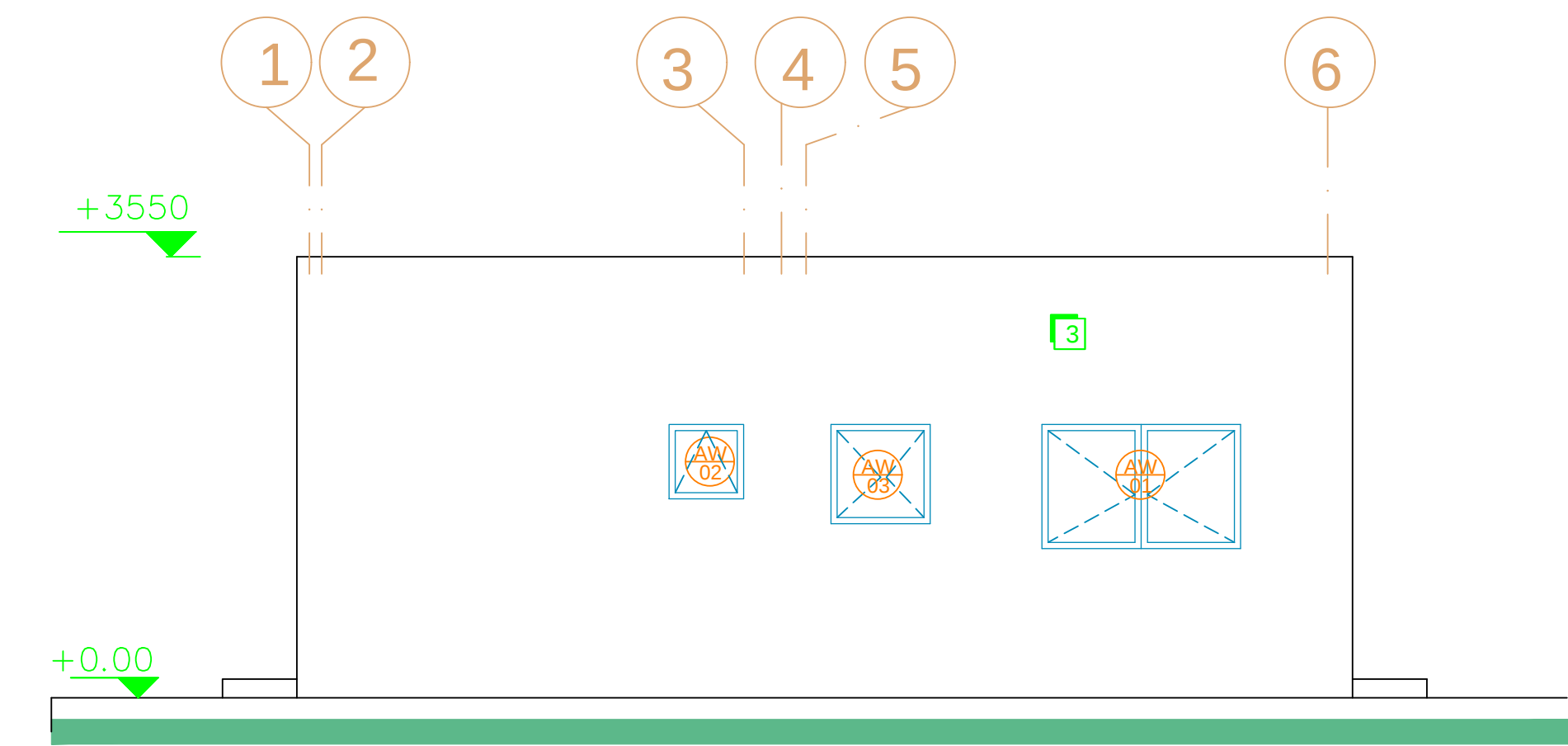
Design	EMCC
Checked	EMCC
Drawing NO.	AD -01
Scale:	1:100
Date:	MAY. 2020



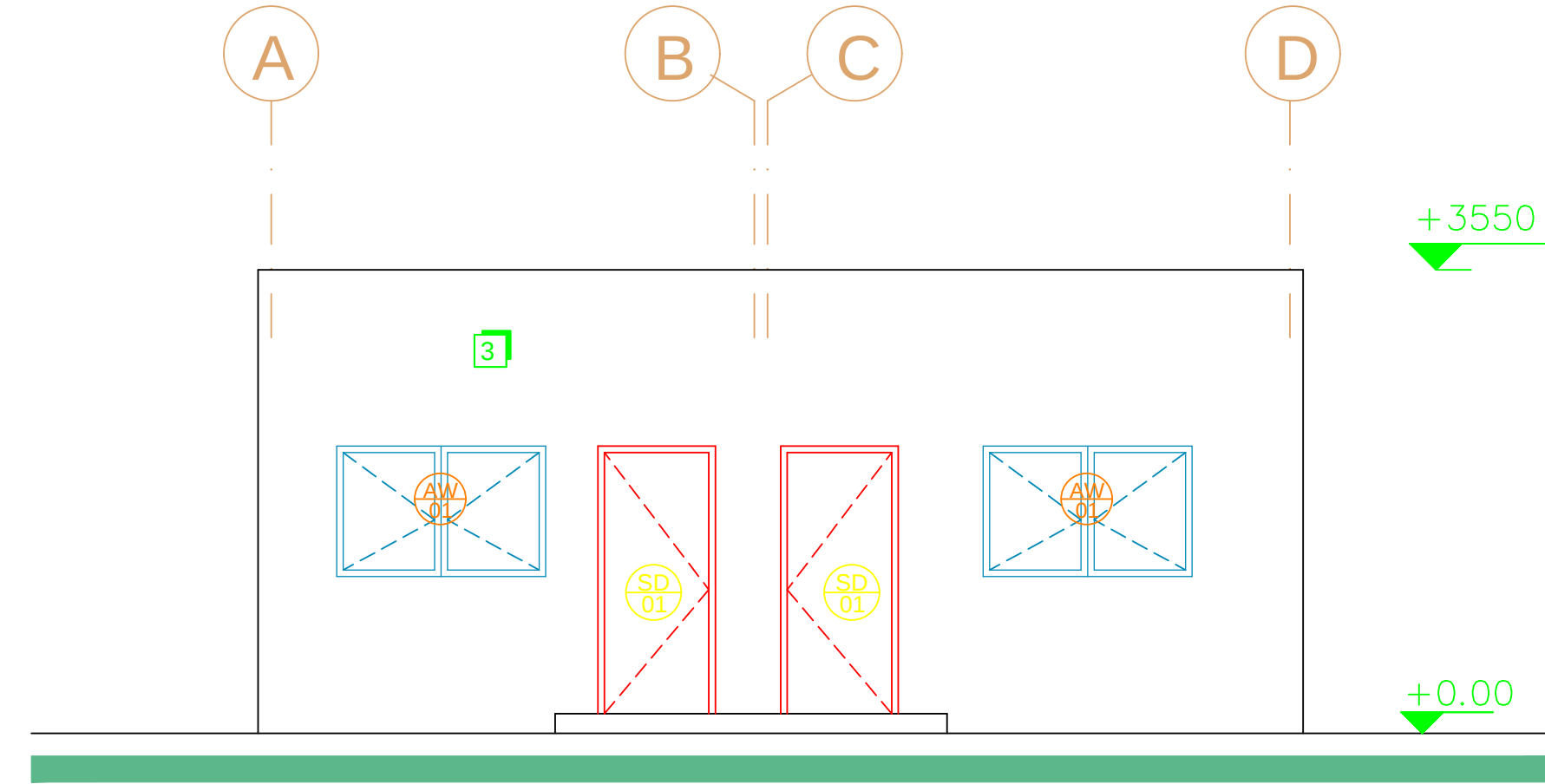
Elevation 02



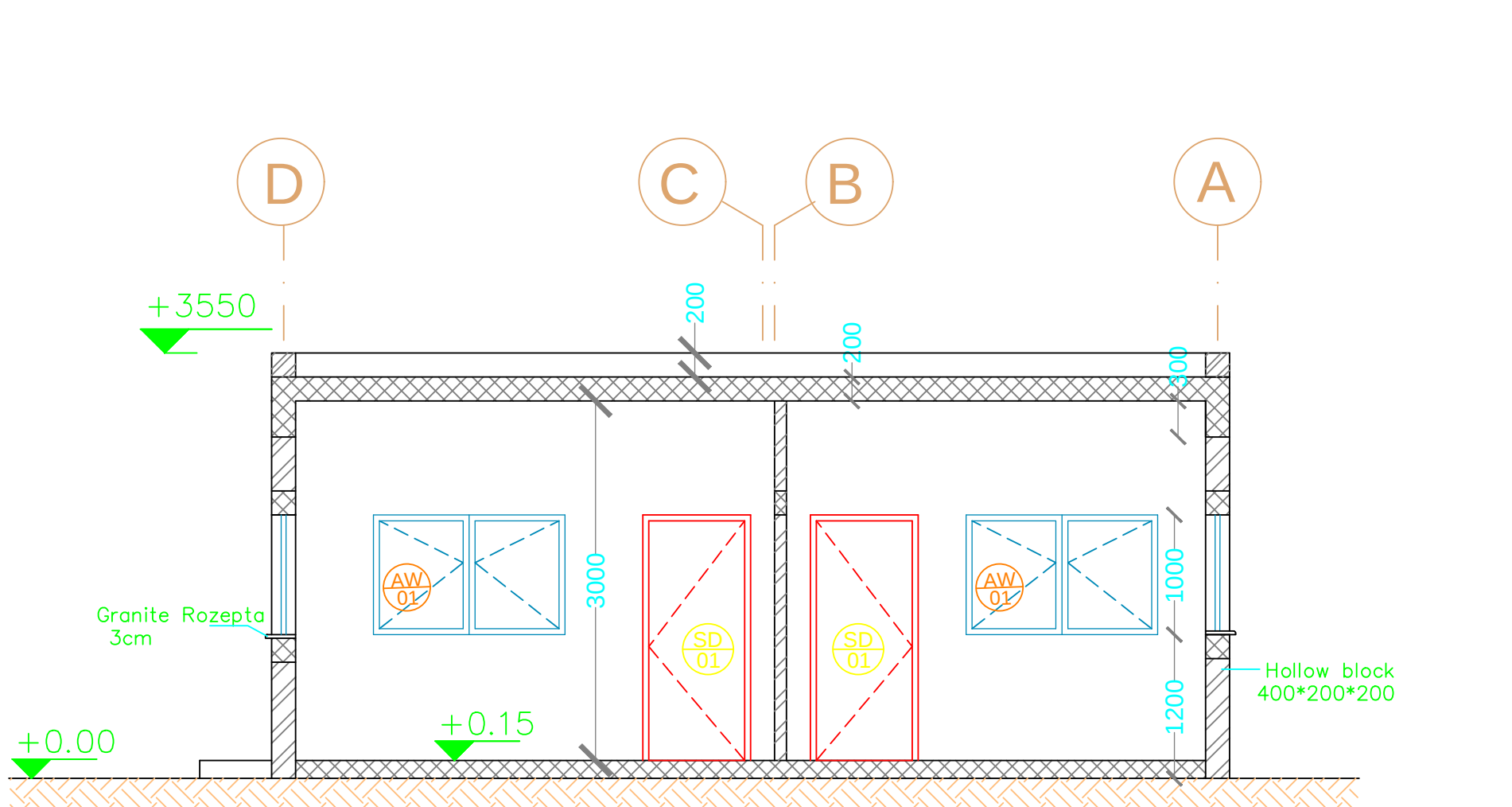
Elevation 01



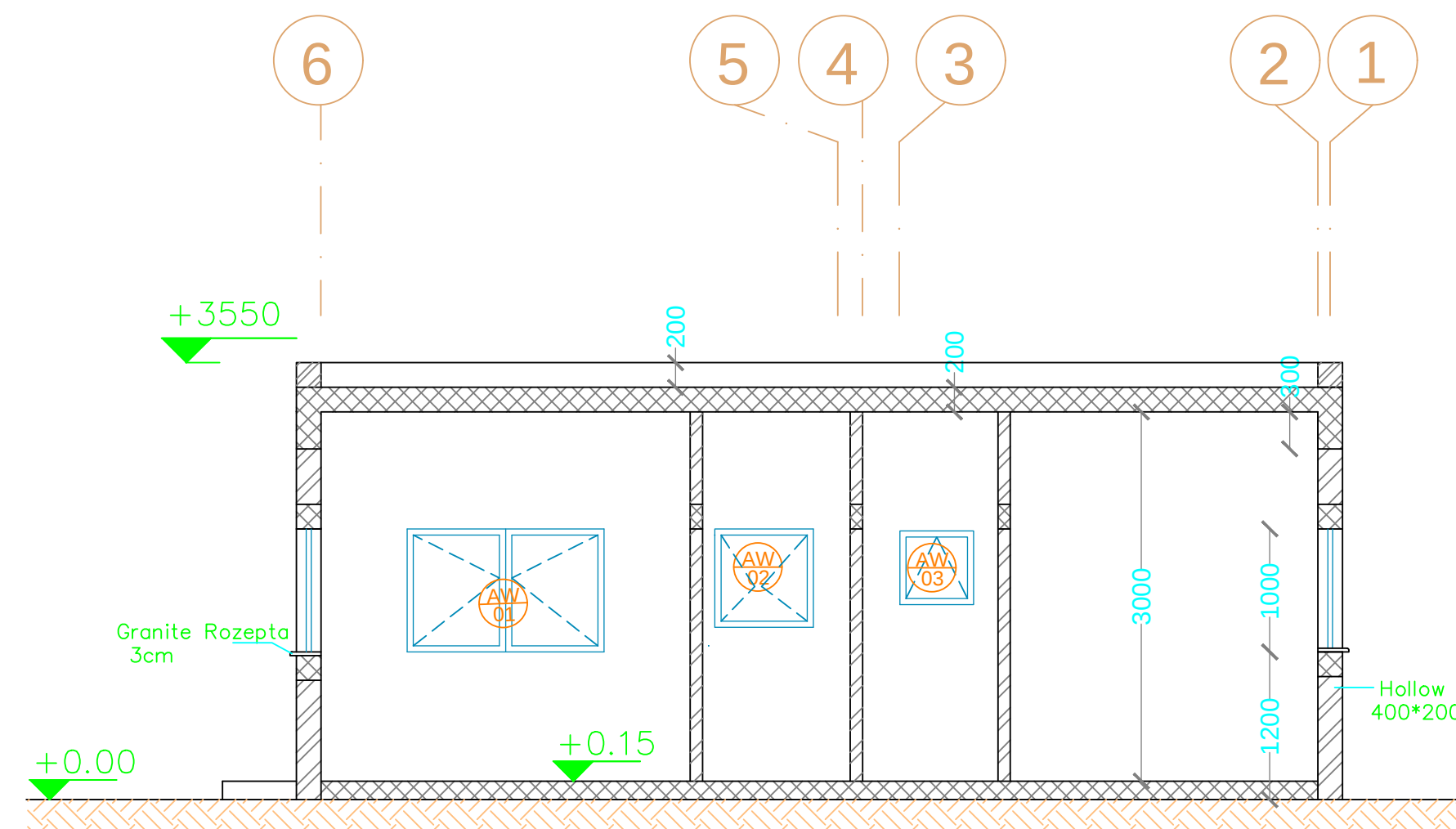
Elevation 04



Elevation 03



Section B-B



Section A-A

Notes:

TABLE OF FINISHES:	
FLOORS:	C W F
1	Terrazzo tiles 30x30cm
2	Non slip ceramic tiles 30x30 cm Spanish or equivalent (Class A).
3	Porcelain tiles 40x40 cm Spanish or equivalent (Class A).
4	Light weight insulation concrete Bitumen Membrane 4mm thick
CEILING:	
1	Plaster & Paint (Supercryle Paint)
WALLS:	
1	Glazed Ceramic Tile 40x 25cm up to 220cm Spanish or equivalent (Class A).
2	Plaster & Paint
3	PLASTER & OKOS FINISH
BASE:(SKIRTING)	
1	Terrazzo Skirting 7x25x1.5cm
2	Porcelain skirting 7x40 cm
3	Bitumen Membrane 4mm thick



Project Name:
Provision of Detailed Design and Technical Assistance Services for the Construction of Solar Energy System for Khan Younis Waste Water Treatment Plant (KY WWTP)

RFP No. :
PAL- 0000093741

Drawing Title: Admin Building
Architecture Drawings

Design EMCC

Checked EMCC

Drawing NO. AD -02

Scale: 1:100

Date: MAY. 2020

Notes:
ALL DIMENSIONS ARE IN (mm) UNLESS OTHERWISE MENTIONED.

CONCRETE GRADE

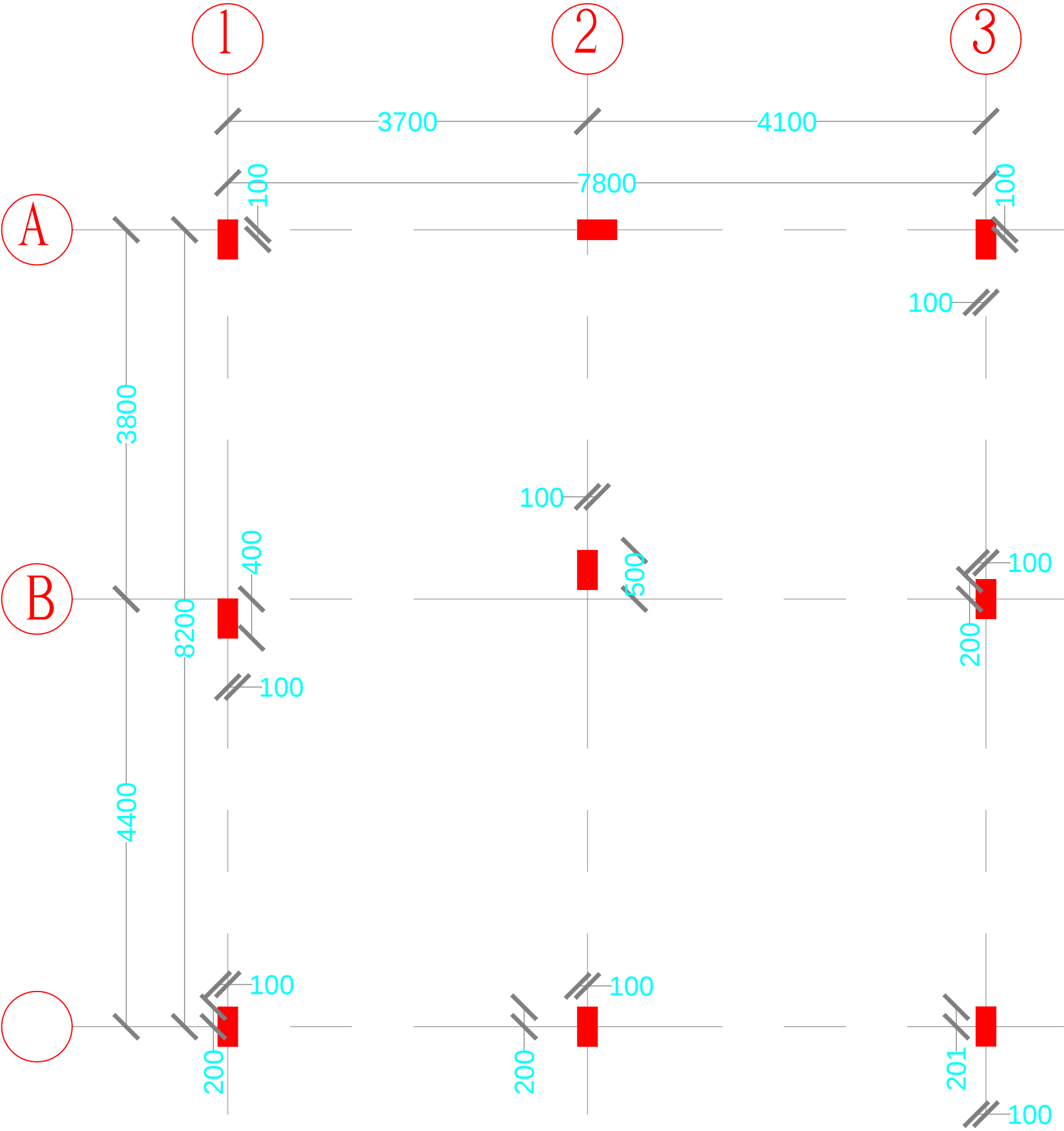
ITEM	CLASS	CUBE STRENGTH 28D
1-PLAIN CONCRETE	B200	230 kg/cm2
2-OTHERS	B250	288 kg/cm2
3-COLUMNS	B300	345 kg/cm2

CONCRETE COVER

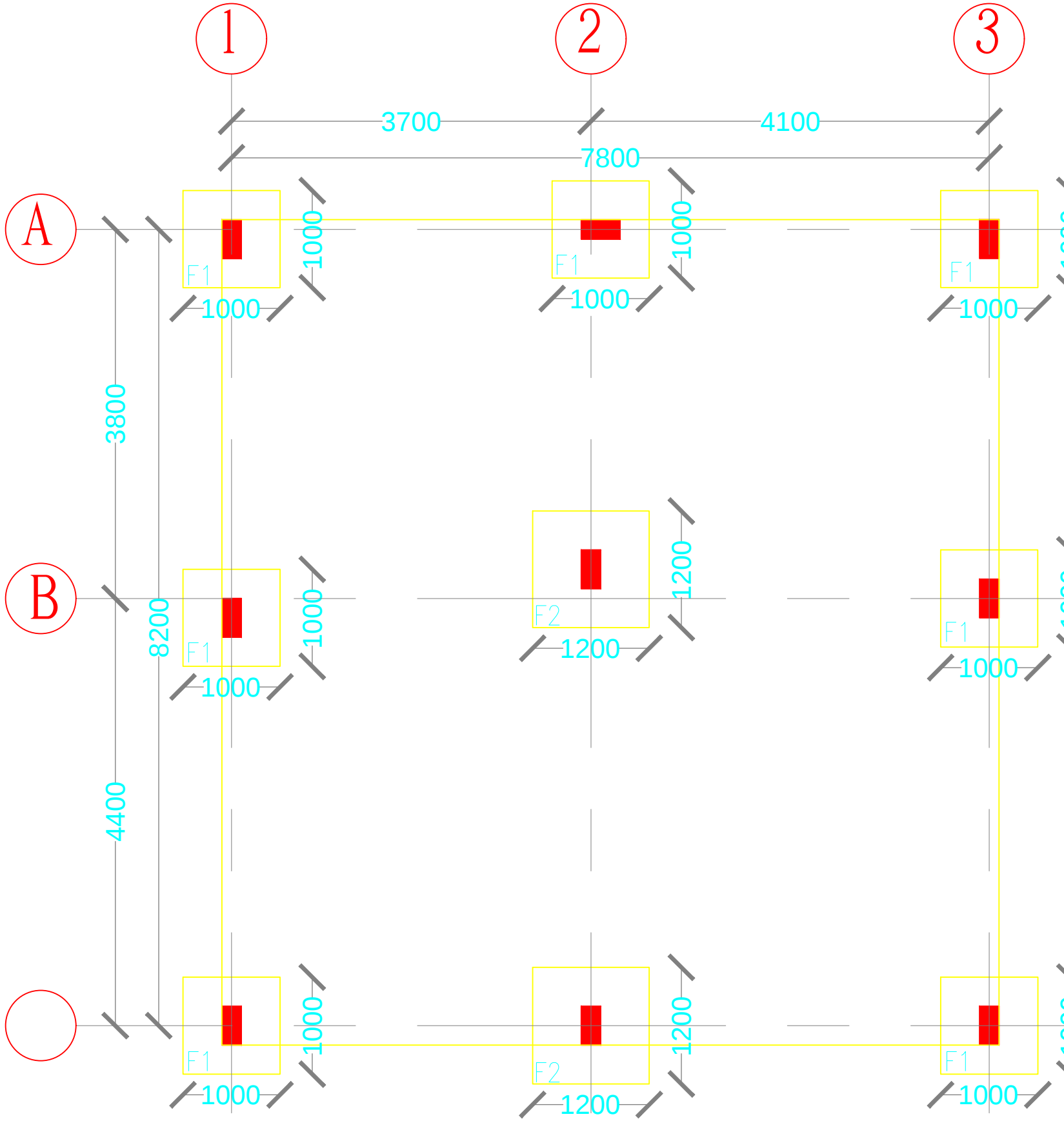
- 1- 70mm IN FOUNDATIONS
- 1- 40mm IN COLUMNS
- 2- 30mm SLABS

CONCRETE PROTECTION

- 1-CONCRETE UP TO PLINTH LEVEL MUST BE COATED WITH TWO COATS OF HOT BITUMEN.



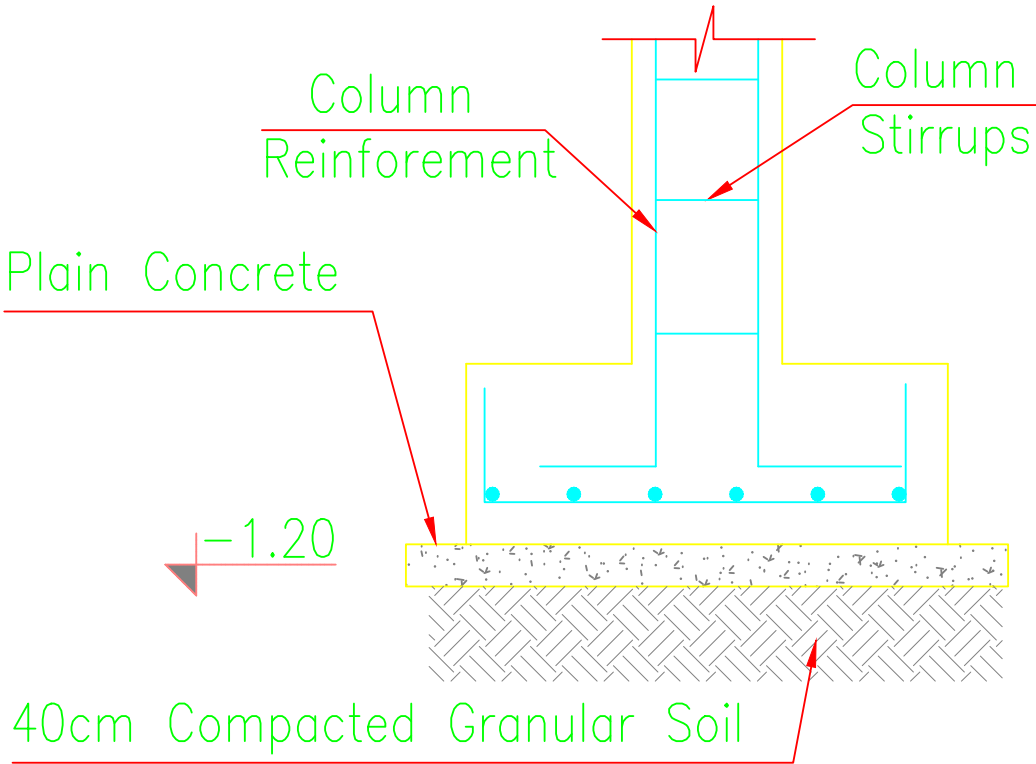
Columns Layout



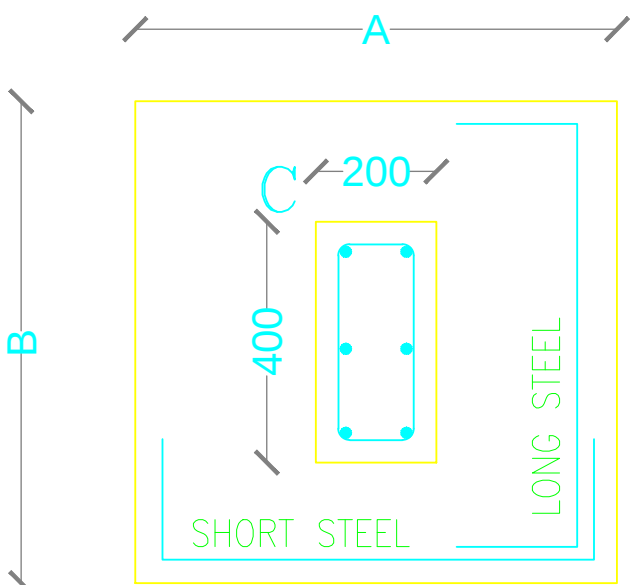
Foundation Layout

FOOTING TABLE

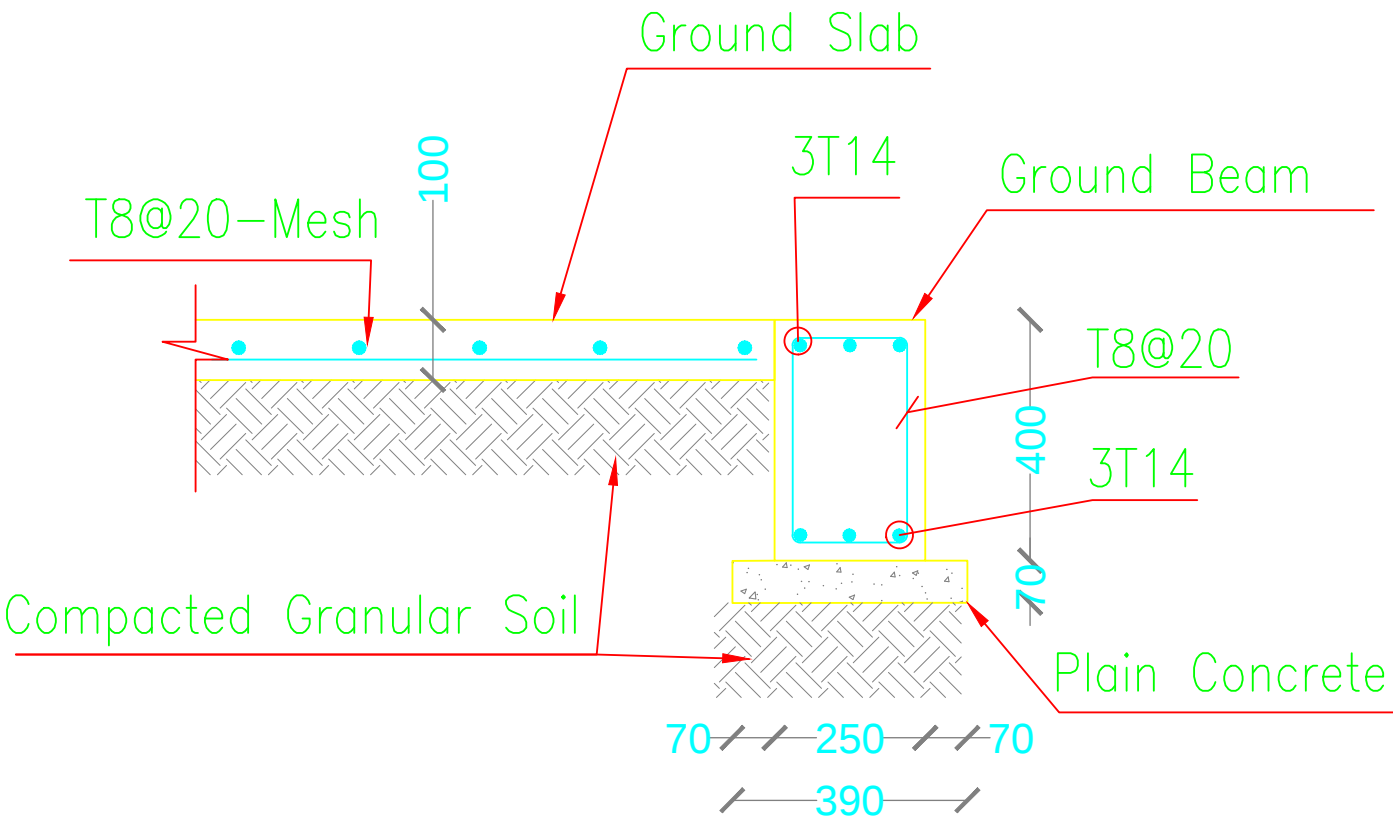
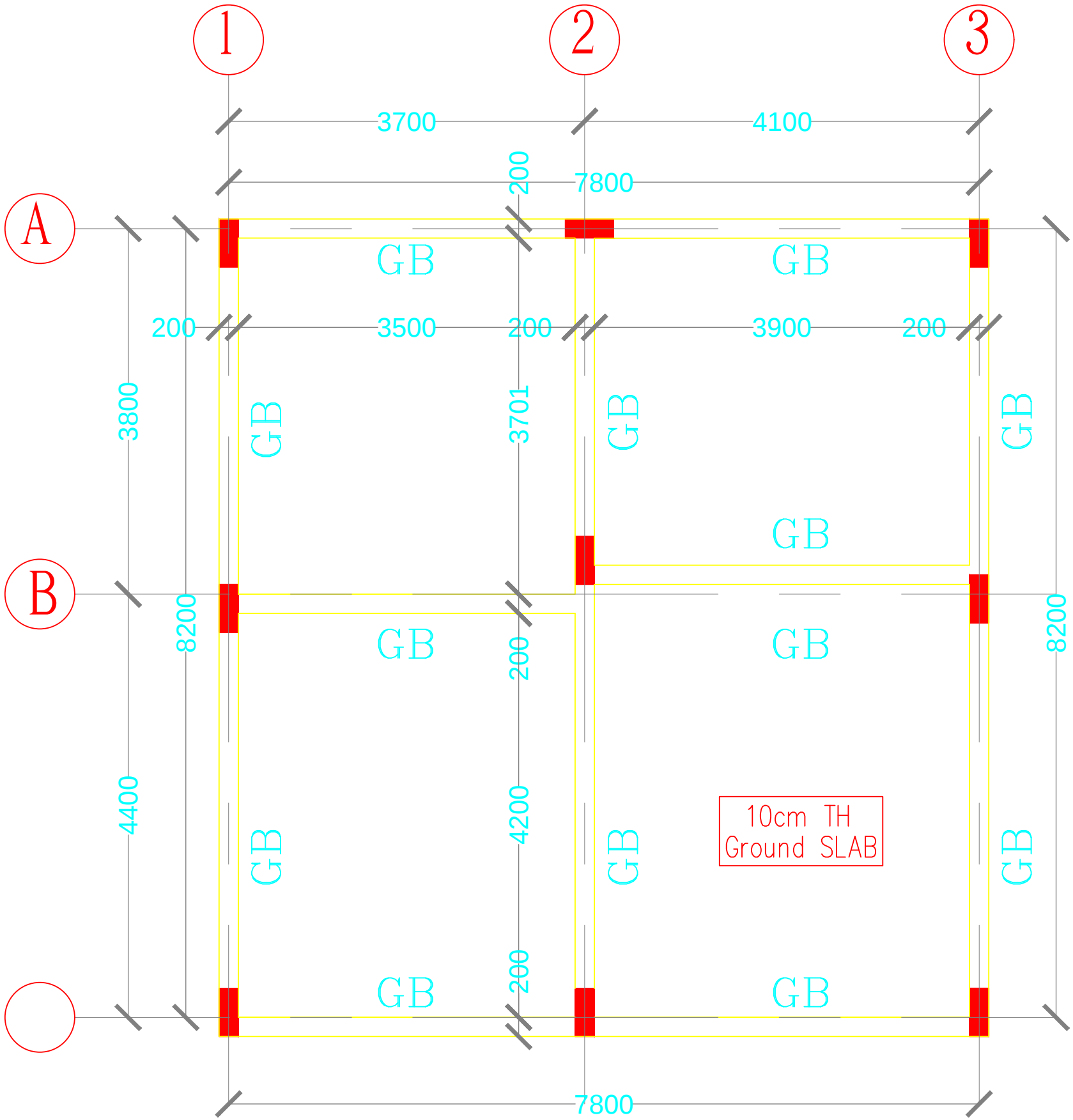
TYPE	NO.	A*B*H(m)	LONG & SHORT STEEL
F1	1	1.0x1.0x0.30	8T12x120
F2	2	1.20x1.20x0.30	10T12x140



Section



Plan



Typical G.B Details
SCALE 1:25

Typical Footing Details
SCALE 1:25

Notes:

Donor

Client

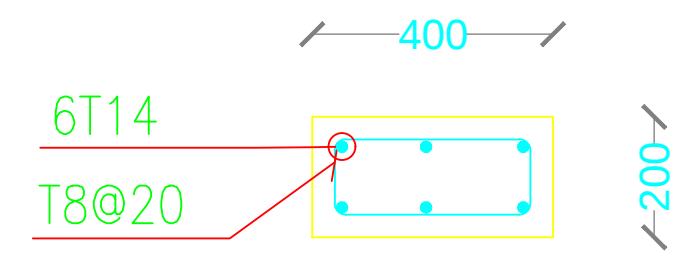
CONSULTANT

Project Name:
Provision of Detailed Design and Technical Assistance Services for the Construction of Solar Energy System for Khan Younis Waste Water Treatment Plant (KY WWTP)

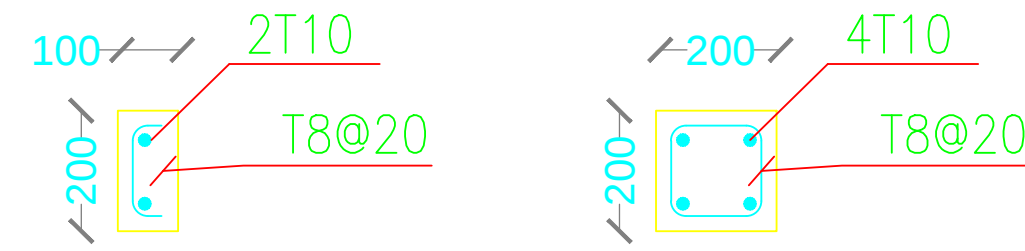
RFP No. :
PAL- 0000093741

Drawing Title: Admin Building
STRUCTURAL DRAWINGS

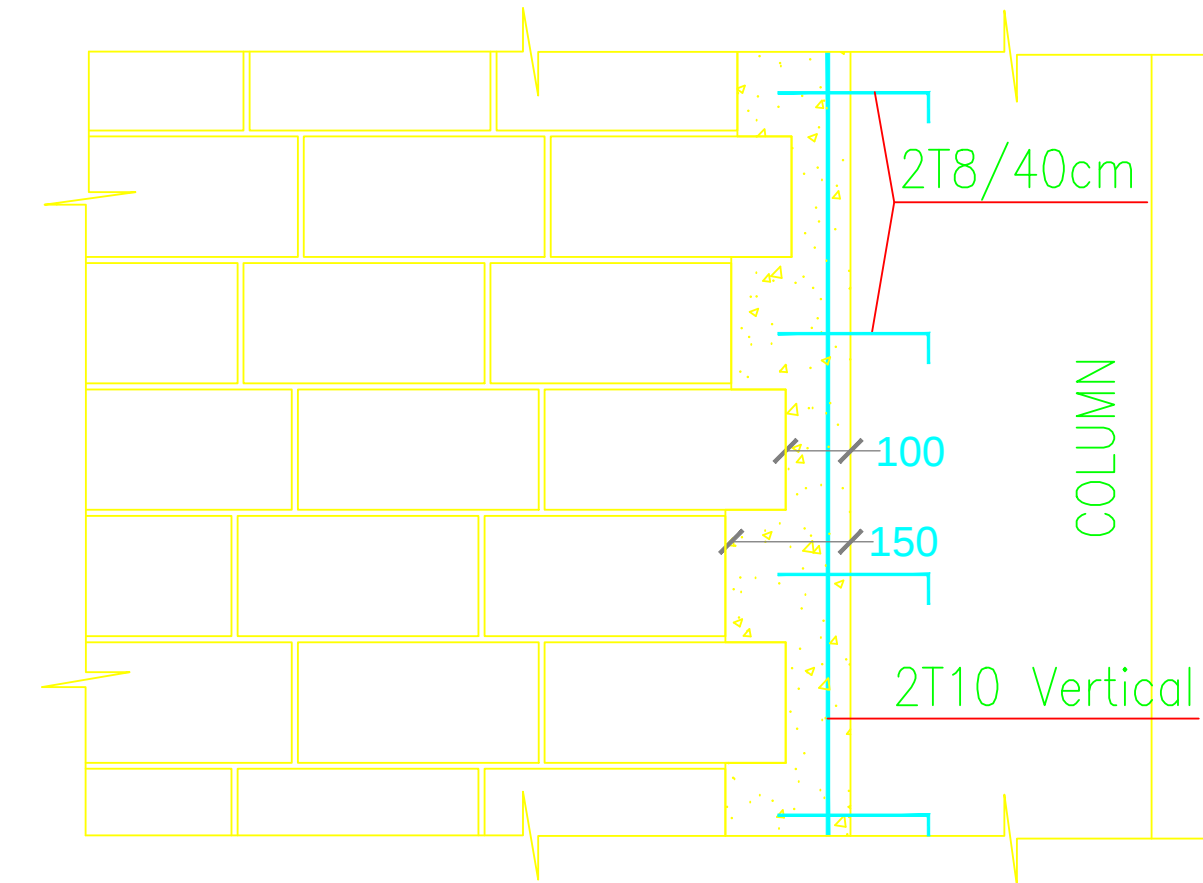
Design	EMCC
Checked	EMCC
Drawing NO.	AD -03
Scale:	1:100
Date:	MAY. 2020



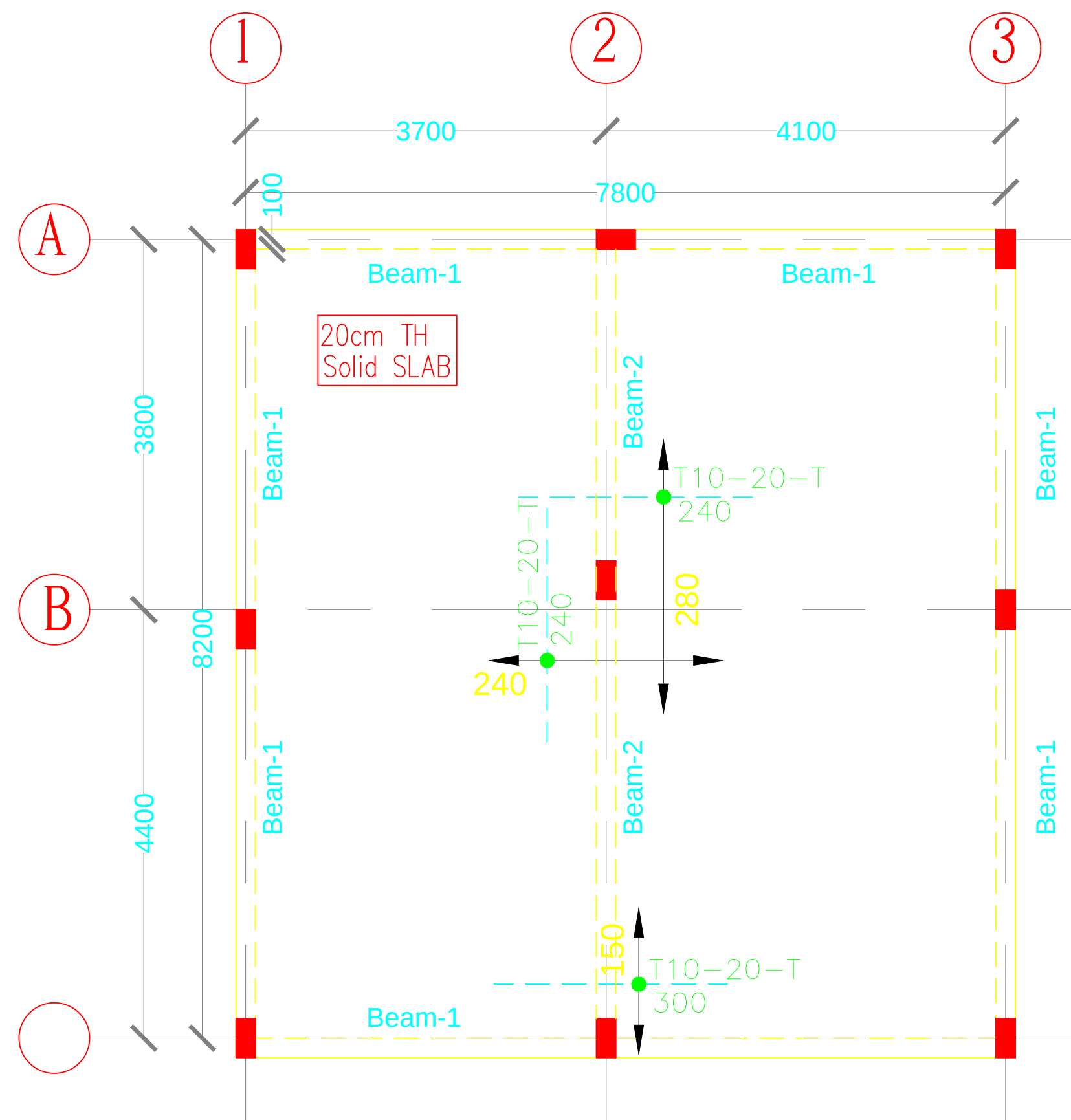
Columns Details
1:25



Typical Lentils&sills Details
1:25

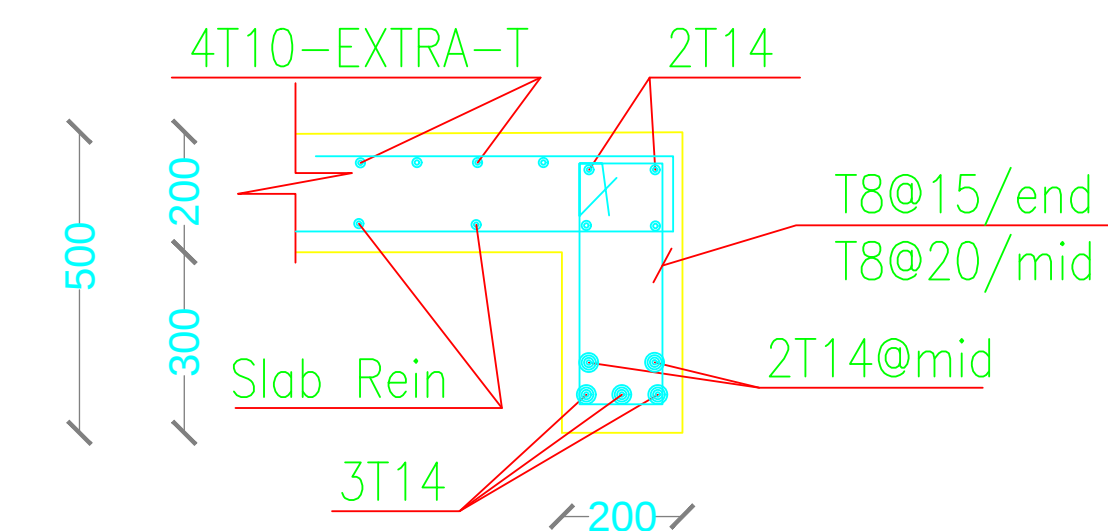


POST COLUMN DETAILS
1:25

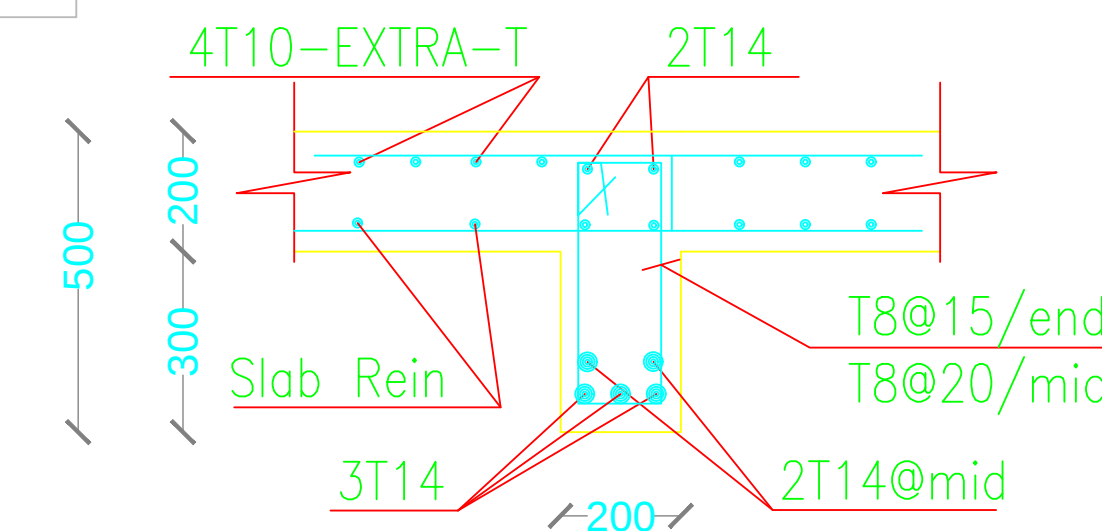


NOTES:-

- 1-Solid Slab Thickness TH=20cm as mentioned on plan.
- 2-Mesh T12@20 cm bottom both ways.
Mesh T12@20 cm top both ways.
- 3-Only extra reinforcement are shown on plan.
- 4-Provide 4T16 top & bot around all openings.
- 5 -Slab Boundaries to be Confirmed from Arch. drg.



Beam-1
1:25



Beam-2
1:25

Notes:

Donor

 Norwegian Ministry of Foreign Affairs

Client

 UNDP

CONSULTANT

 EMCC

Project Name:

Provision of Detailed Design and Technical Assistance Services for the Construction of Solar Energy System for Khan Younis Waste Water Treatment Plant (KY WWTP)

RFP No.:

PAL- 0000093741

Drawing Title:

Admin Building
STRUCTURAL DRAWINGS

Design

EMCC

Checked

EMCC

Drawing NO.

AD -04

Scale:

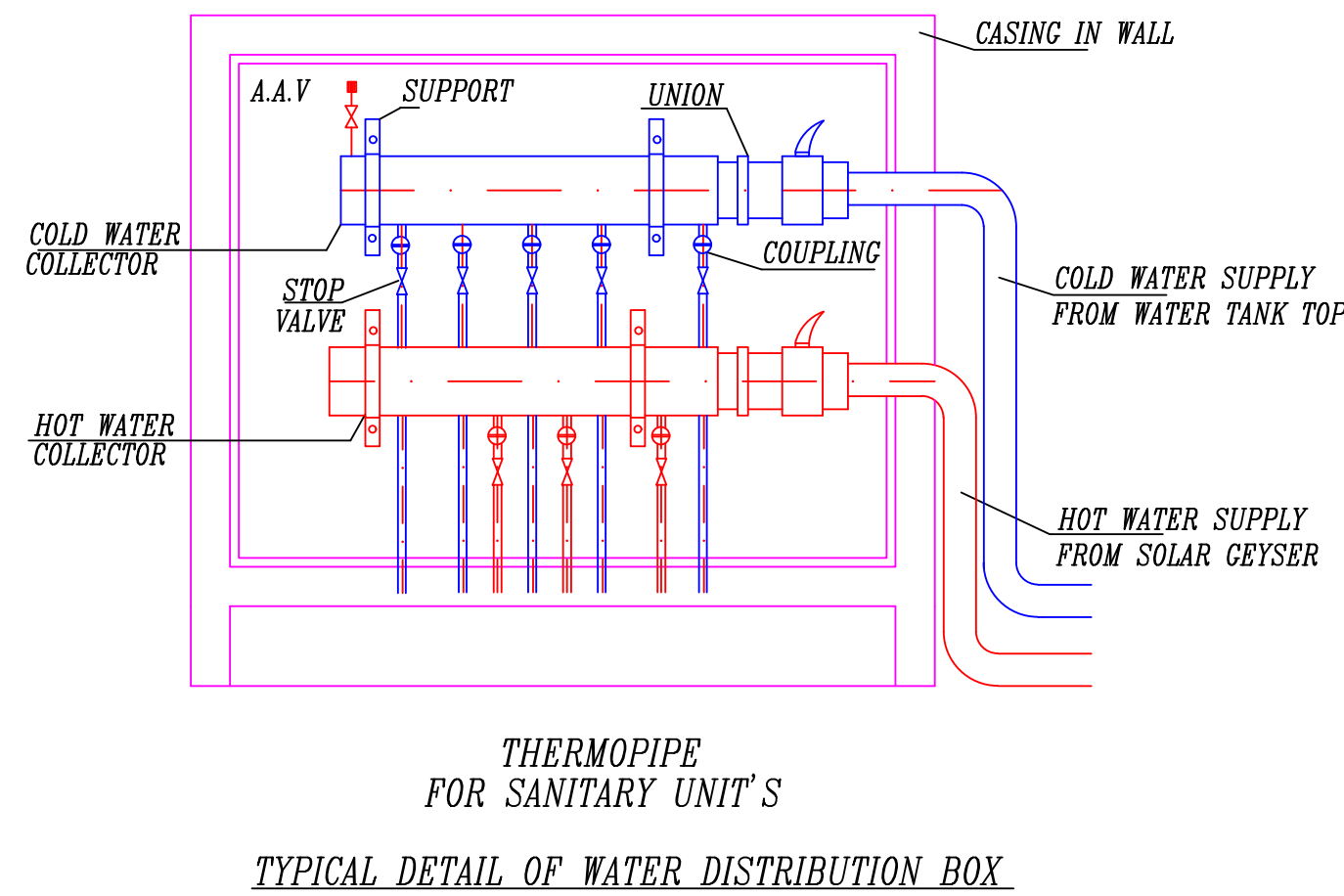
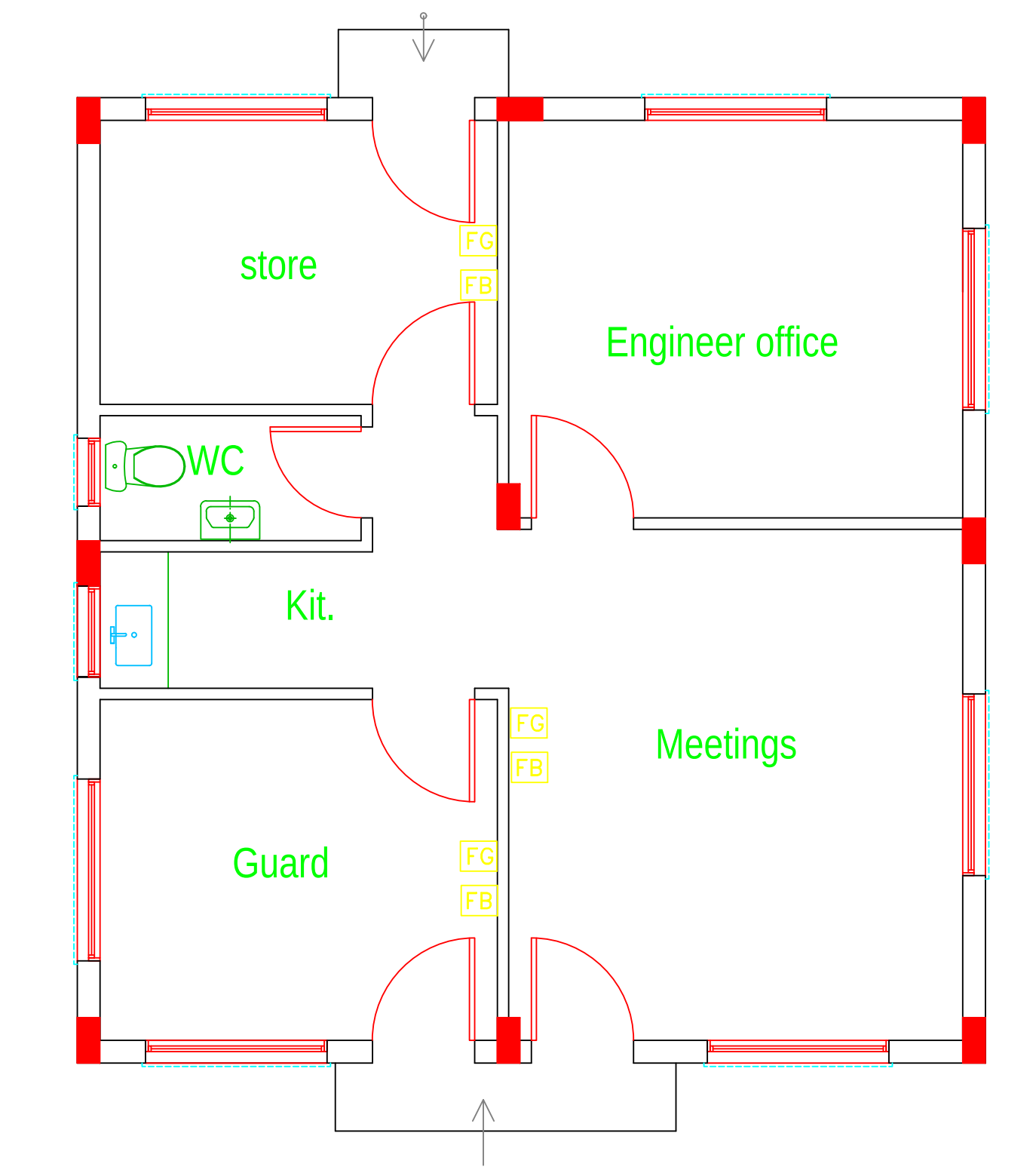
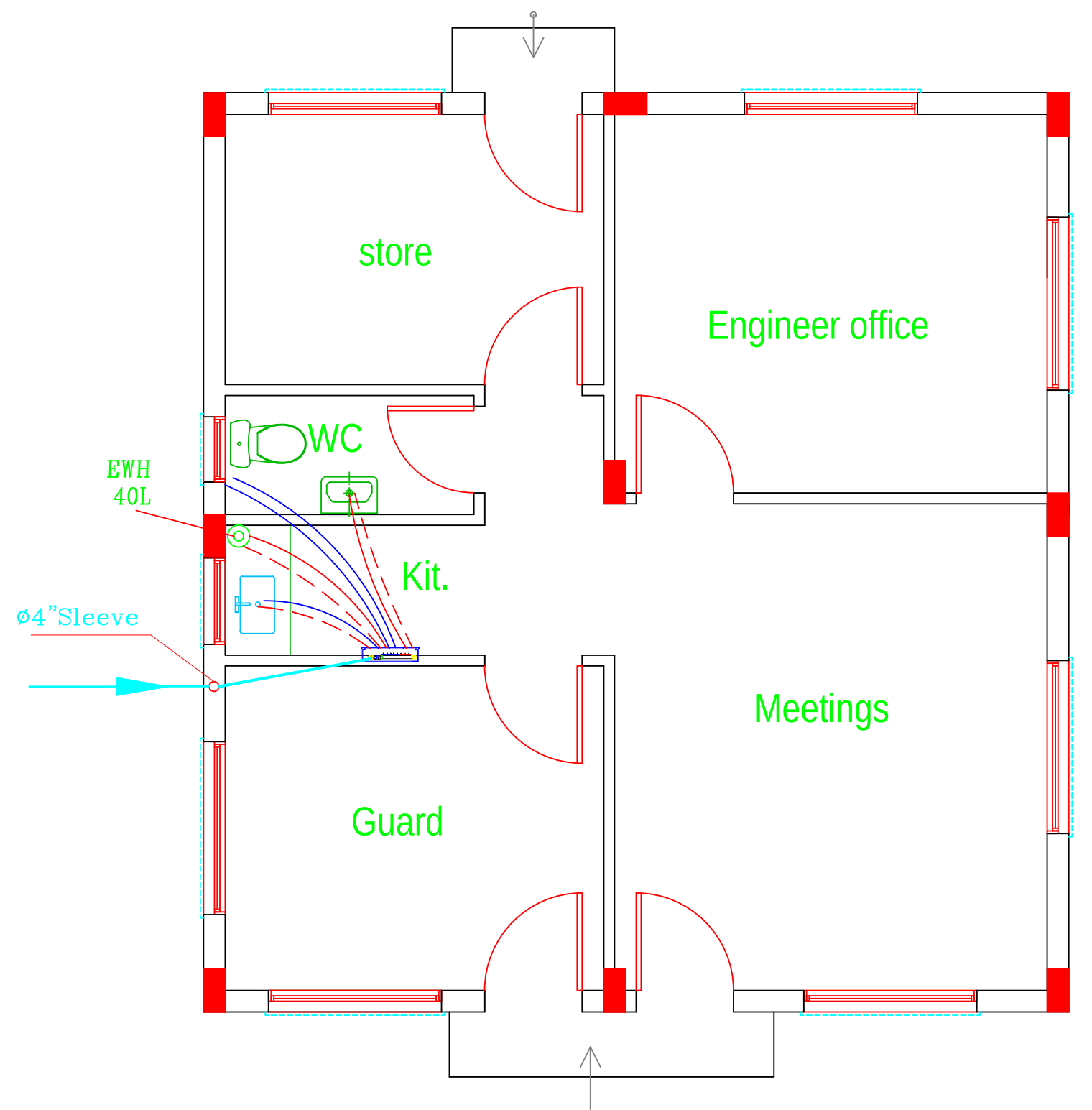
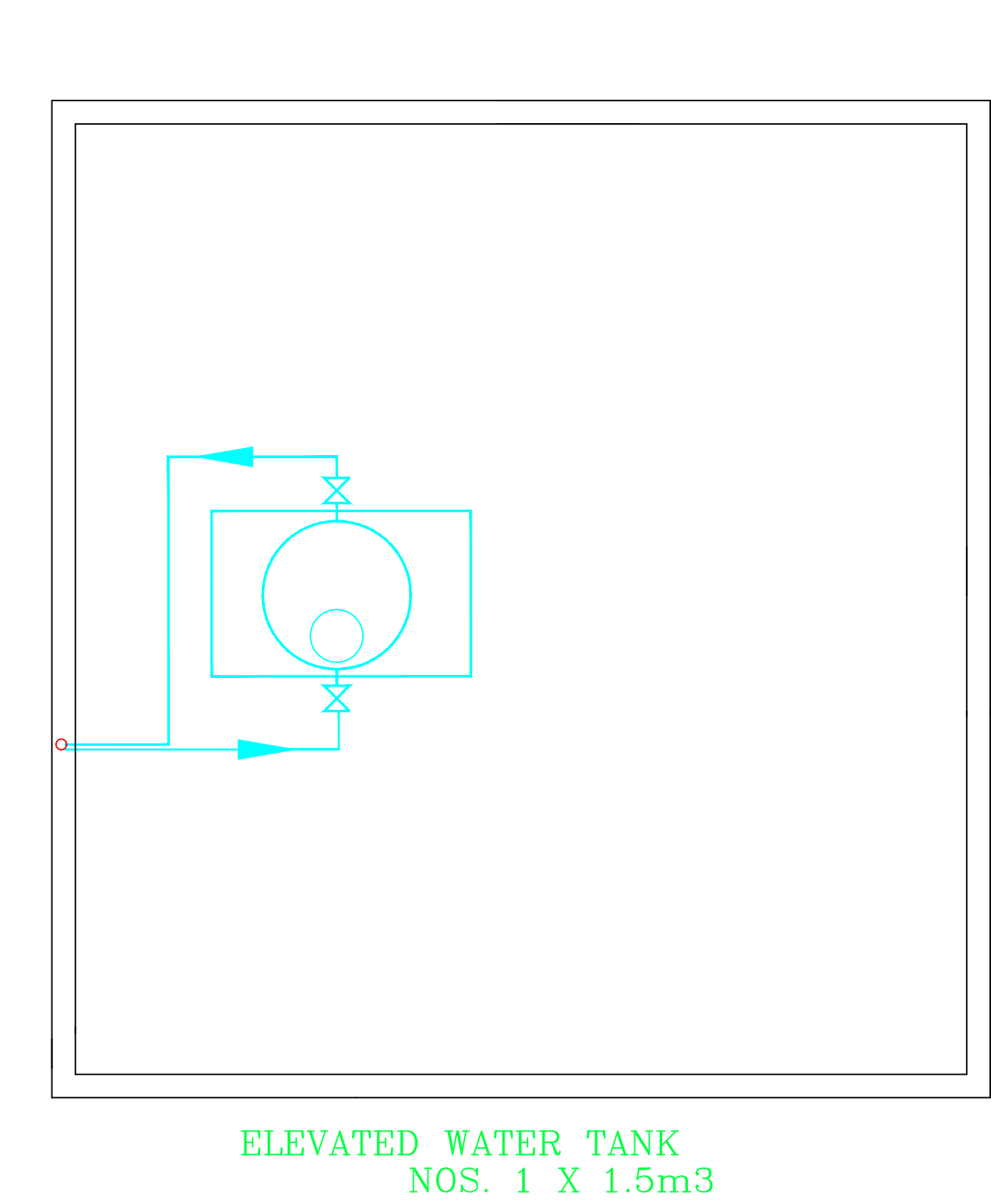
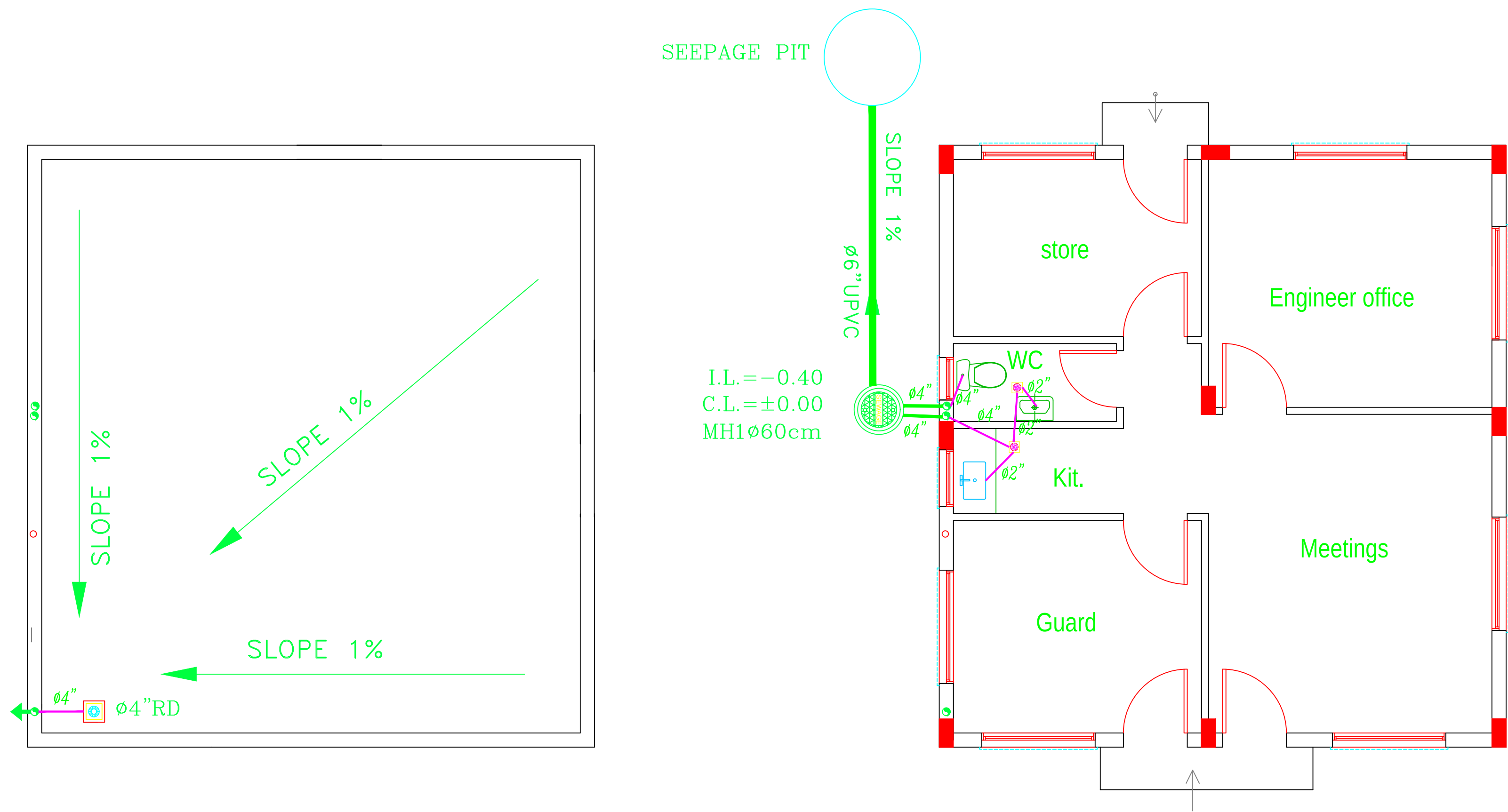
1:100

Date:

MAY. 2020

Note :

- 1- Vitrous China wash basin (45x38cm), completed with chrome plated mixer,
- 2- Vitrous China, European type W.C. First Class, completed with 2.5 Gallon Vitrous China flush reservoir,
- 3- PEX pipes.(16mm Dia. & 25mm. Dia.)



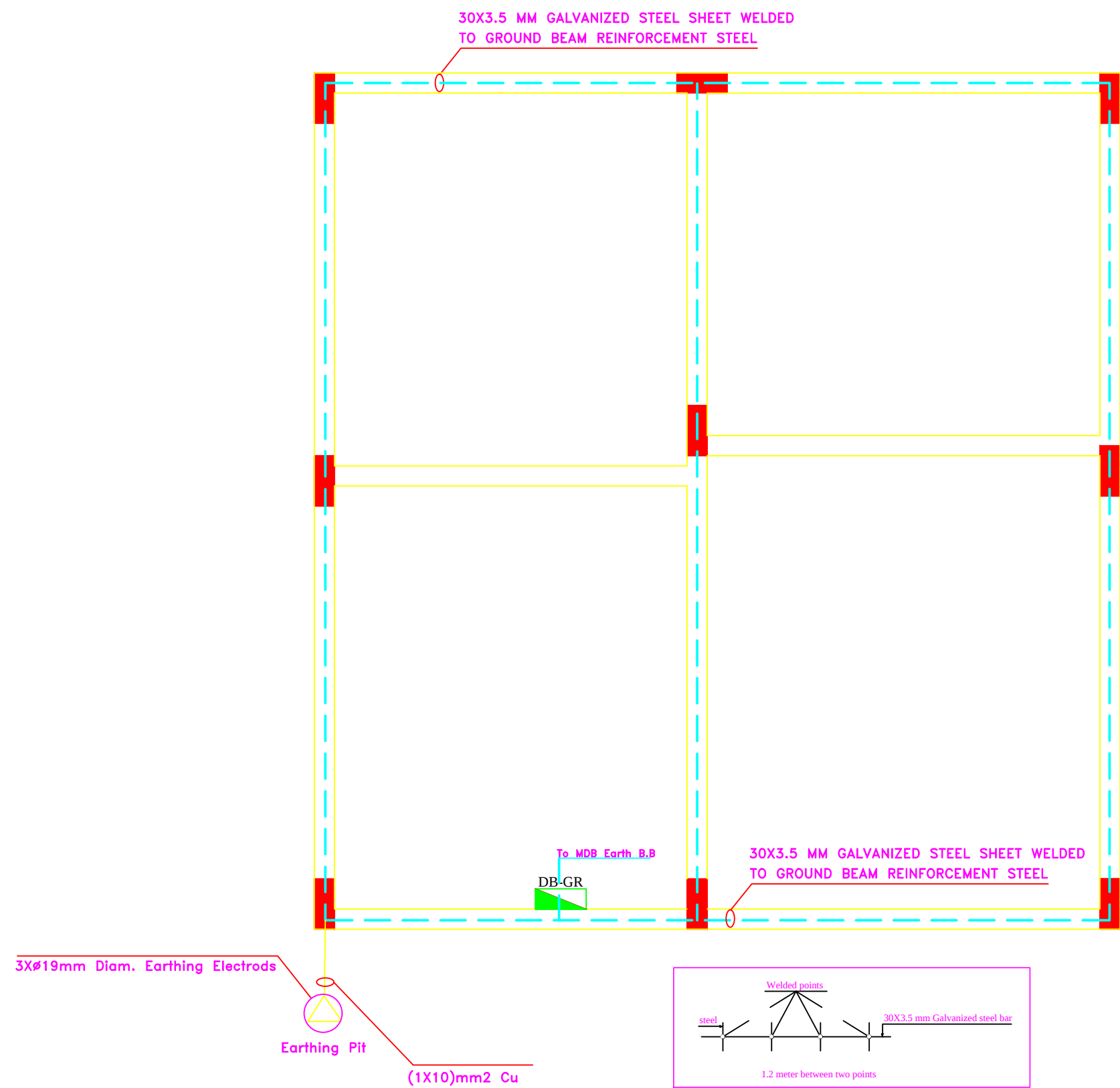
Notes:	
(6kg)powder fire extinguisher	FB
(6kg) (BCF) gas fire extinguisher	FG

Donor

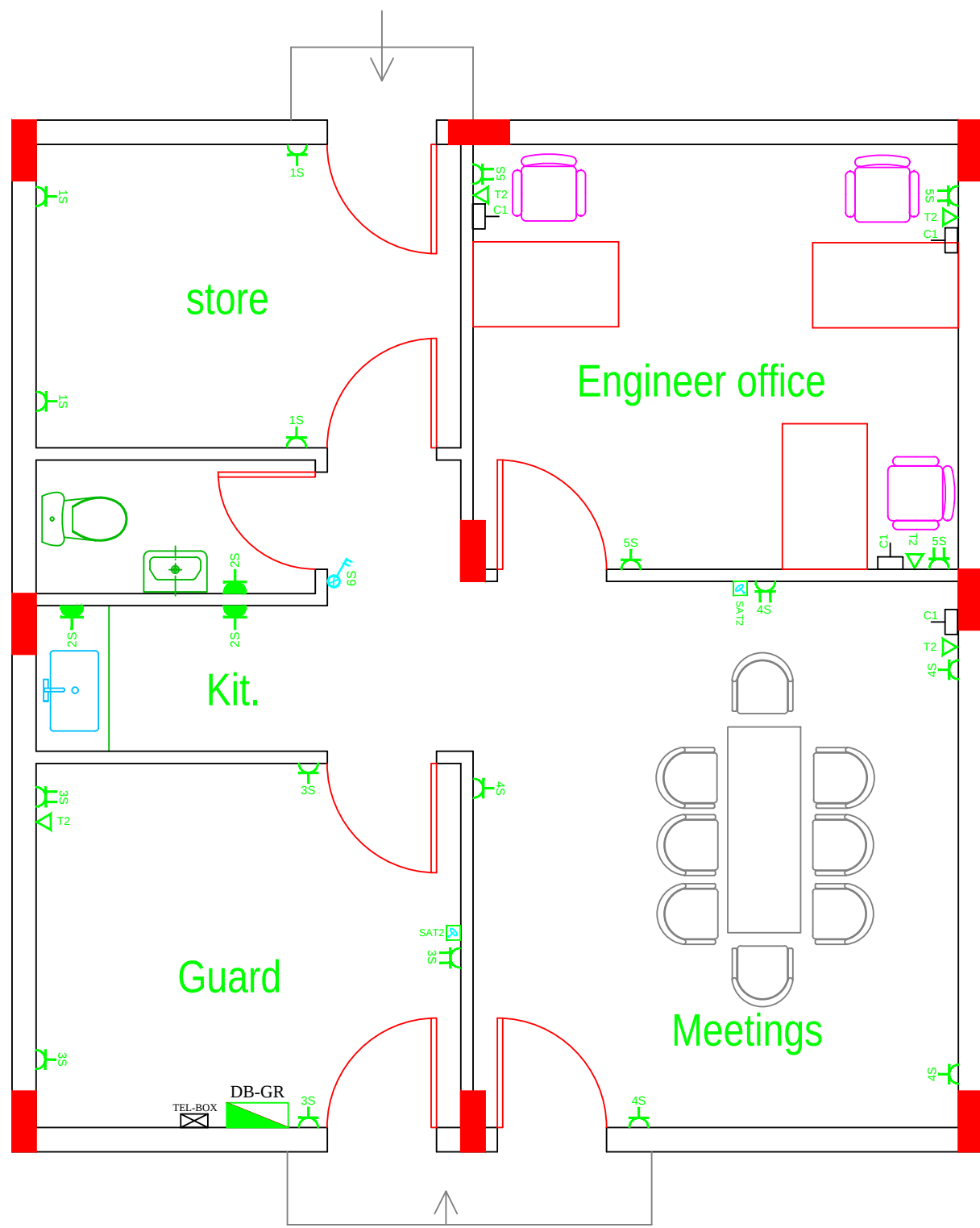
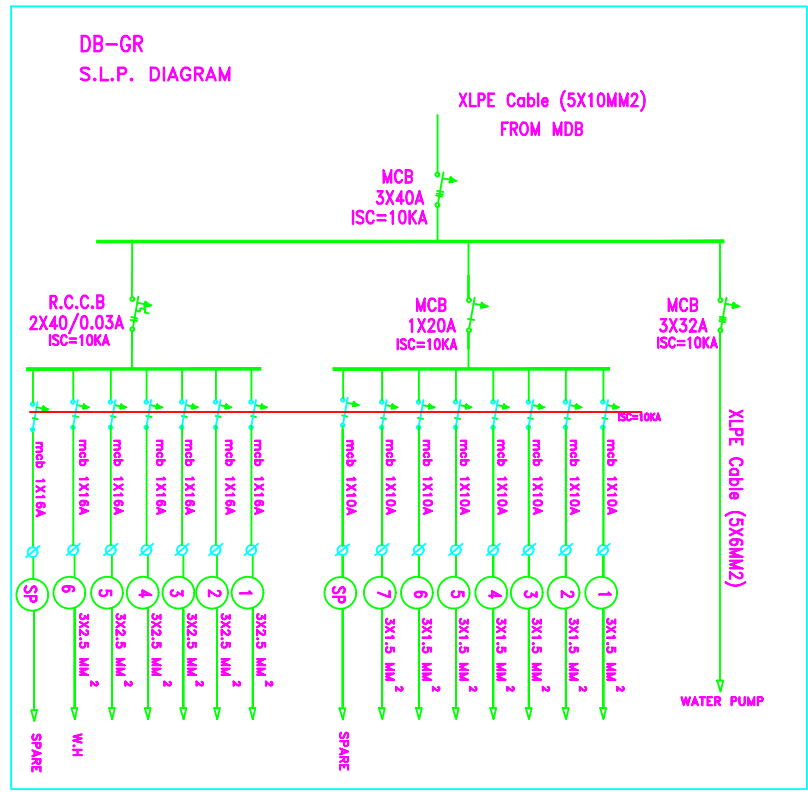
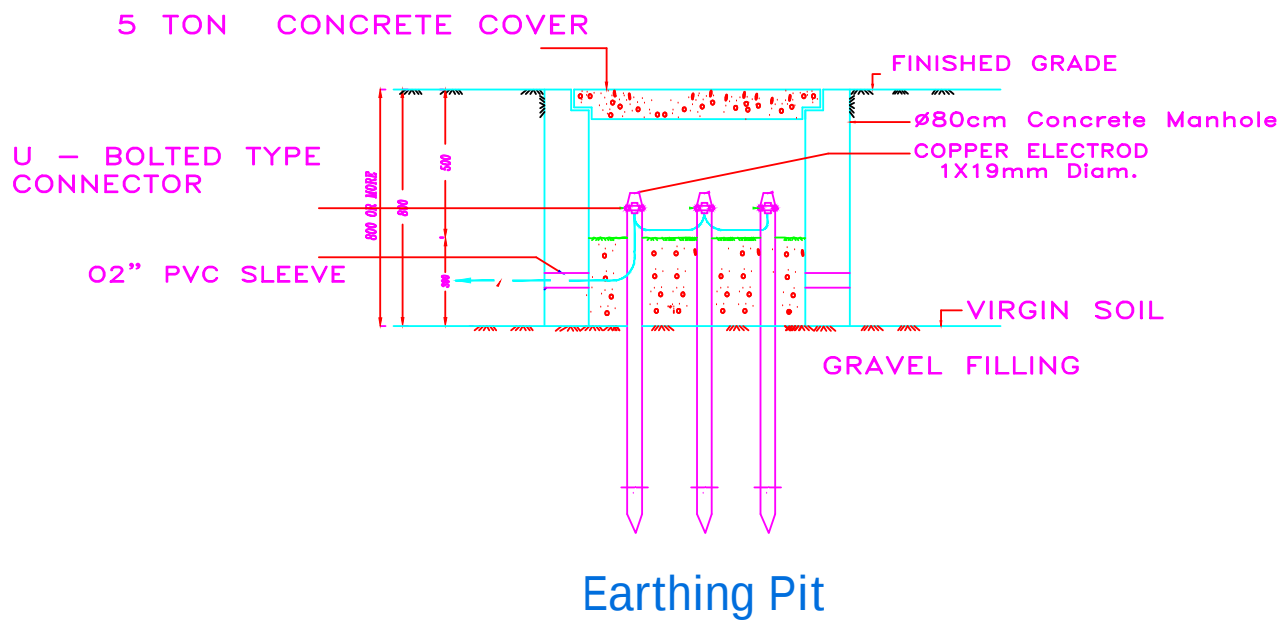
Client

CONSULTANT

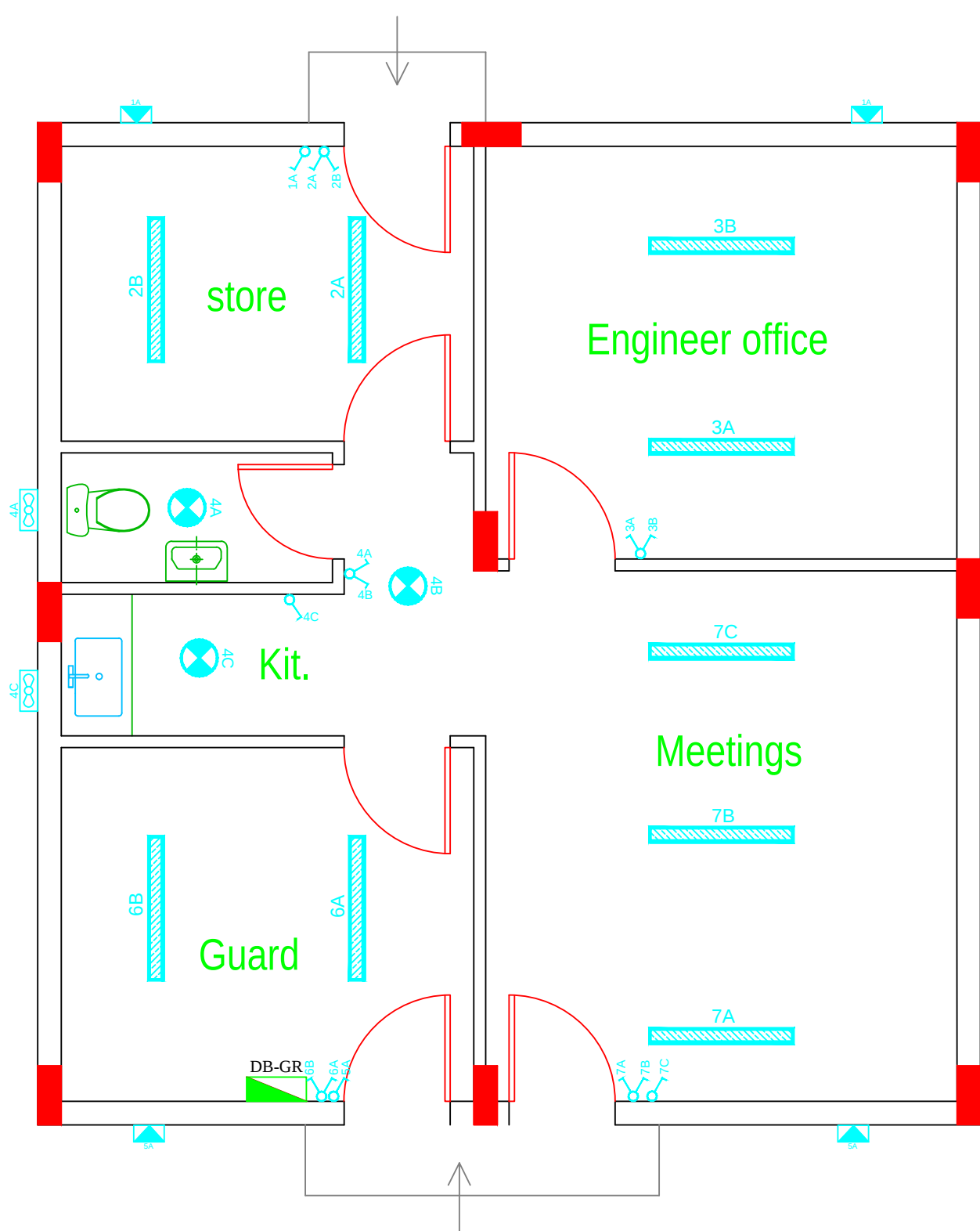
Project Name: Provision of Detailed Design and Technical Assistance Services for the Construction of Solar Energy System for Khan Younis Waste Water Treatment Plant (KY WWTP)	
RFP No. :	PAL- 0000093741
Drawing Title: Admin Building Mechanical Drawings	
Design	EMCC
Checked	EMCC
Drawing NO.	AD -05
Scale:	1:100
Date:	MAY. 2020



EARTHING PLAN FOR ADMIN BUILDING



POWER & TEL PLAN FOR ADMIN BUILDING



LIGHTING PLAN FOR ADMIN BUILDING

SYMBOL	DESCRIPTION
	31W SURFACE MOUNTED LED LIGHTING FIXTURE WITH OUT REFLECTOR IP40.
	10W INCANDESCENT SURFACE MOUNTED LED LIGHT WATER PROOF.
	50W EXTERNAL WALL MOUNTED LED LIGHT IP65.
	6" WALL OR WINDOW MOUNTED EXHAUST FAN WITH MOVEABLE LOUVERS.
	ONE GANG, ONE WAY LIGHTING SWITCH-10A.
	TWO GANG, ONE WAY LIGHTING SWITCH-10A.
	16A SINGLE PHASE, 3-PIN SOCKET OUTLET.
	DITTO BUT DUPLEX SOCKET OUTLET.
	DITTO BUT WATER PROOF IP65.
	T.V SOCKET OUTLET.
	TELEPHONE SOCKET OUTLET.
	SUB DISTRIBUTION BOARD HOT G.STEEL THICKENS 2 mm
	Telephone junction box
	Computer outlet
	WATER HEATER SWITCH WITH LAMPS.

Electrical Symbols

Notes:

LEGEND

Donor

Client

CONSULTANT

Project Name:

Provision of Detailed Design and Technical Assistance Services for the Construction of Solar Energy System for Khan Younis Waste Water Treatment Plant (KY WWTP)

RFP No.:

PAL - 0000093741

Drawing Title:

Admin Building Electrical Drawings

Design

EMCC

Checked

EMCC

Drawing NO.

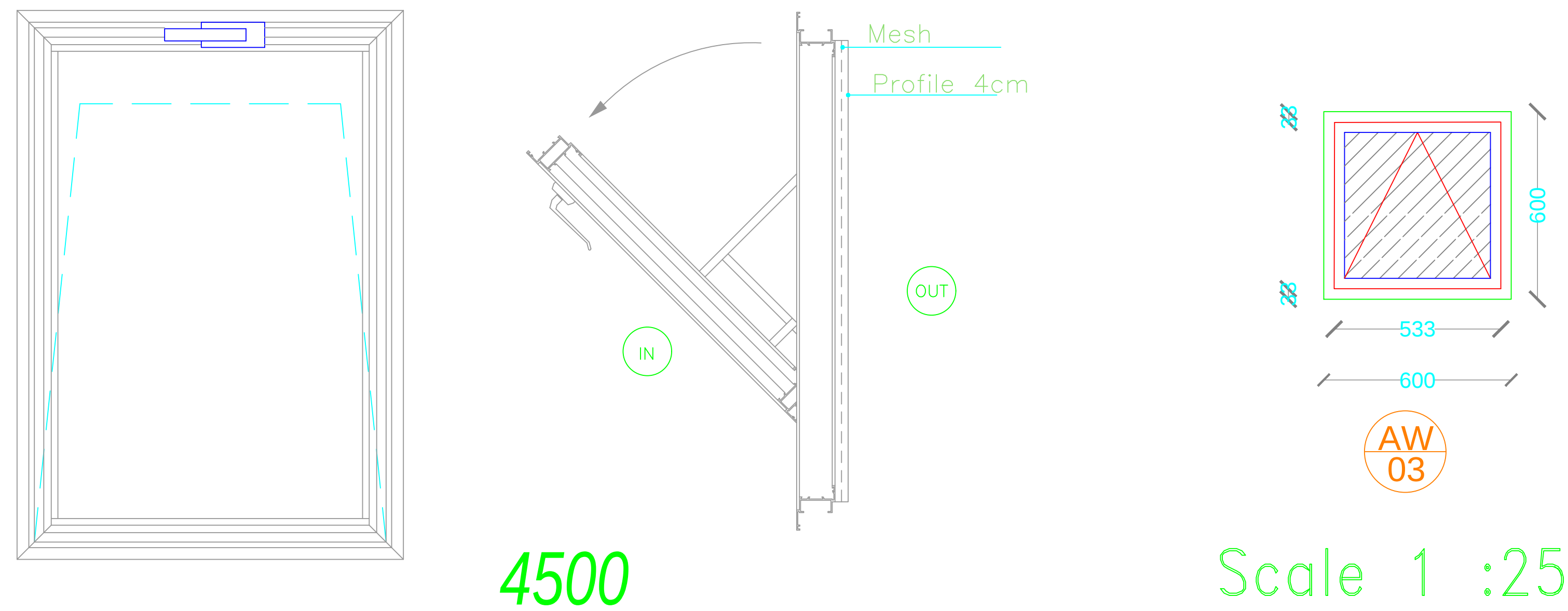
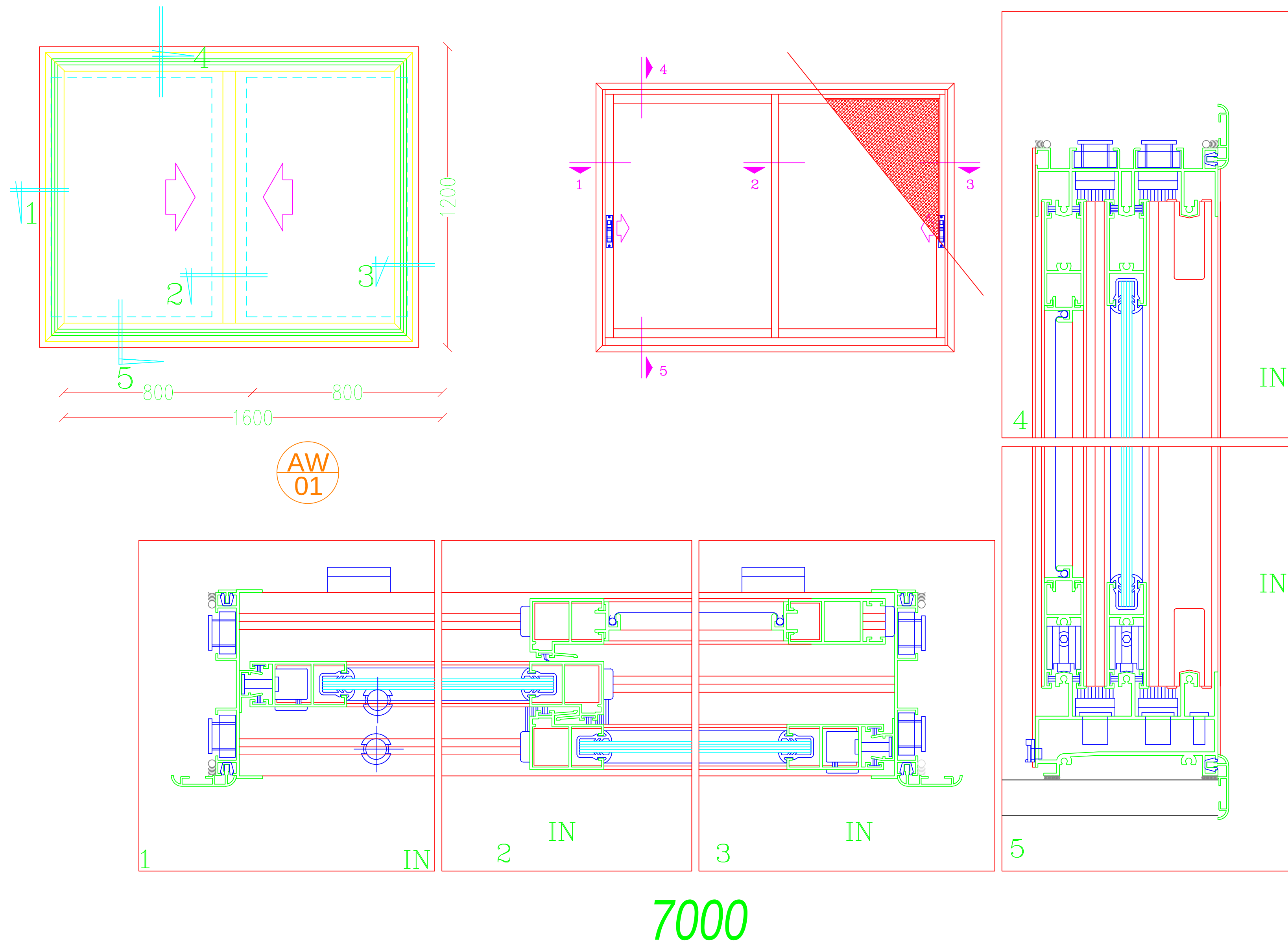
AD-06

Scale:

1:100

Date:

MAY. 2020



Notes:

Donor



Client



CONSULTANT



Project Name:
Provision of Detailed Design and Technical Assistance Services for the Construction of Solar Energy System for Khan Younis Waste Water Treatment Plant (KY WWTP)

RFP No. :
PAL - 0000093741

Drawing Title: Admin Building
WINDOWS DETAILS

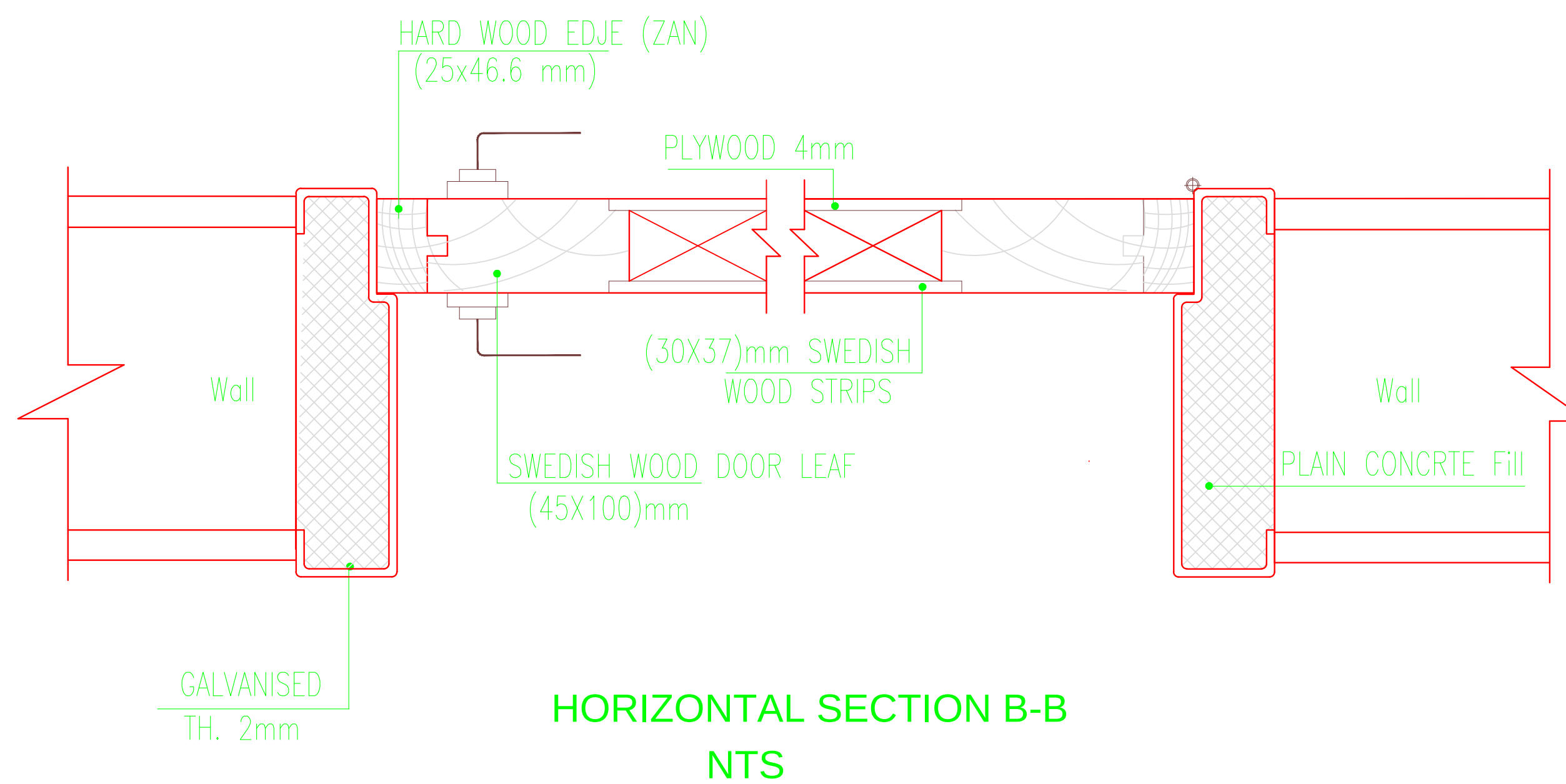
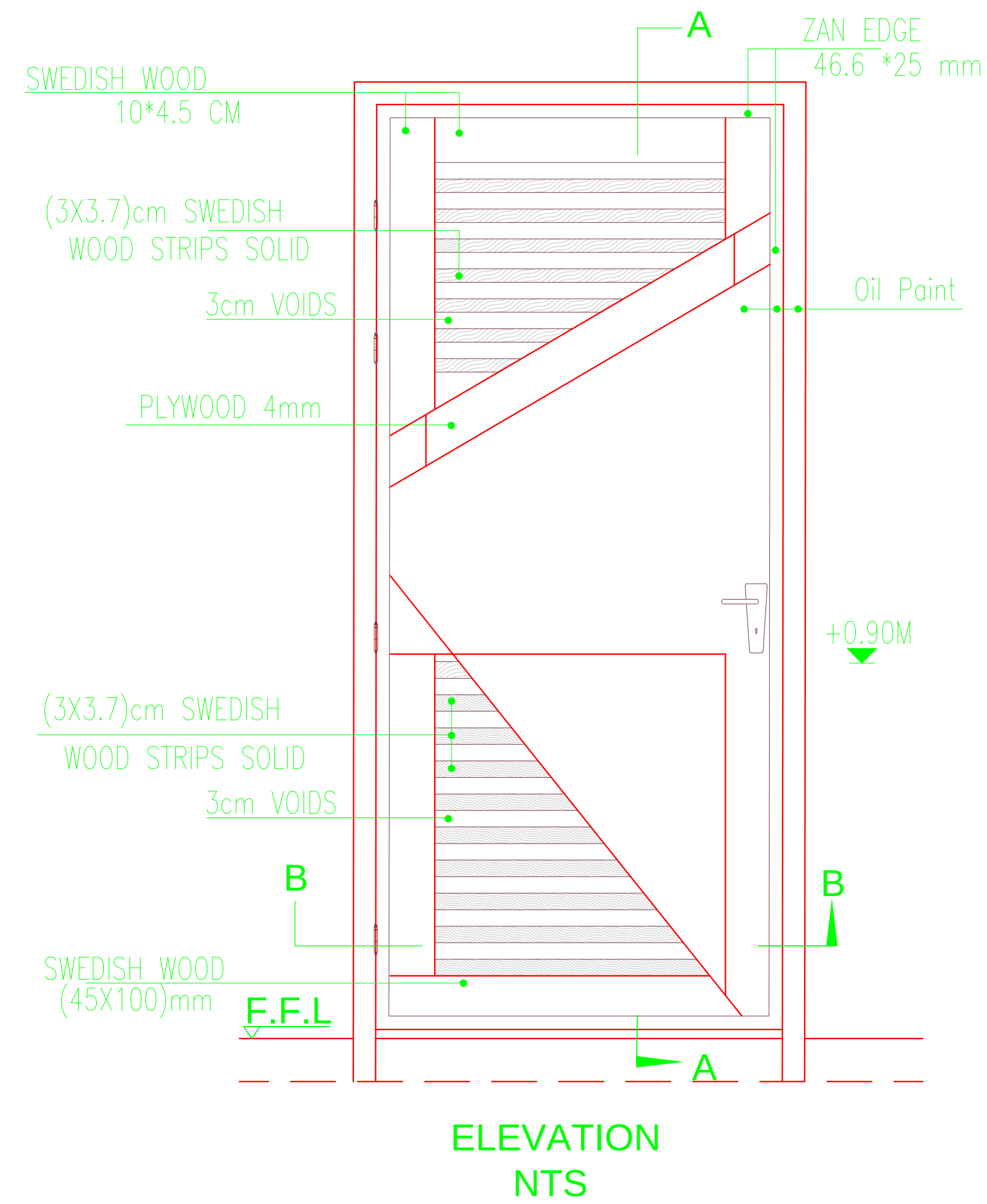
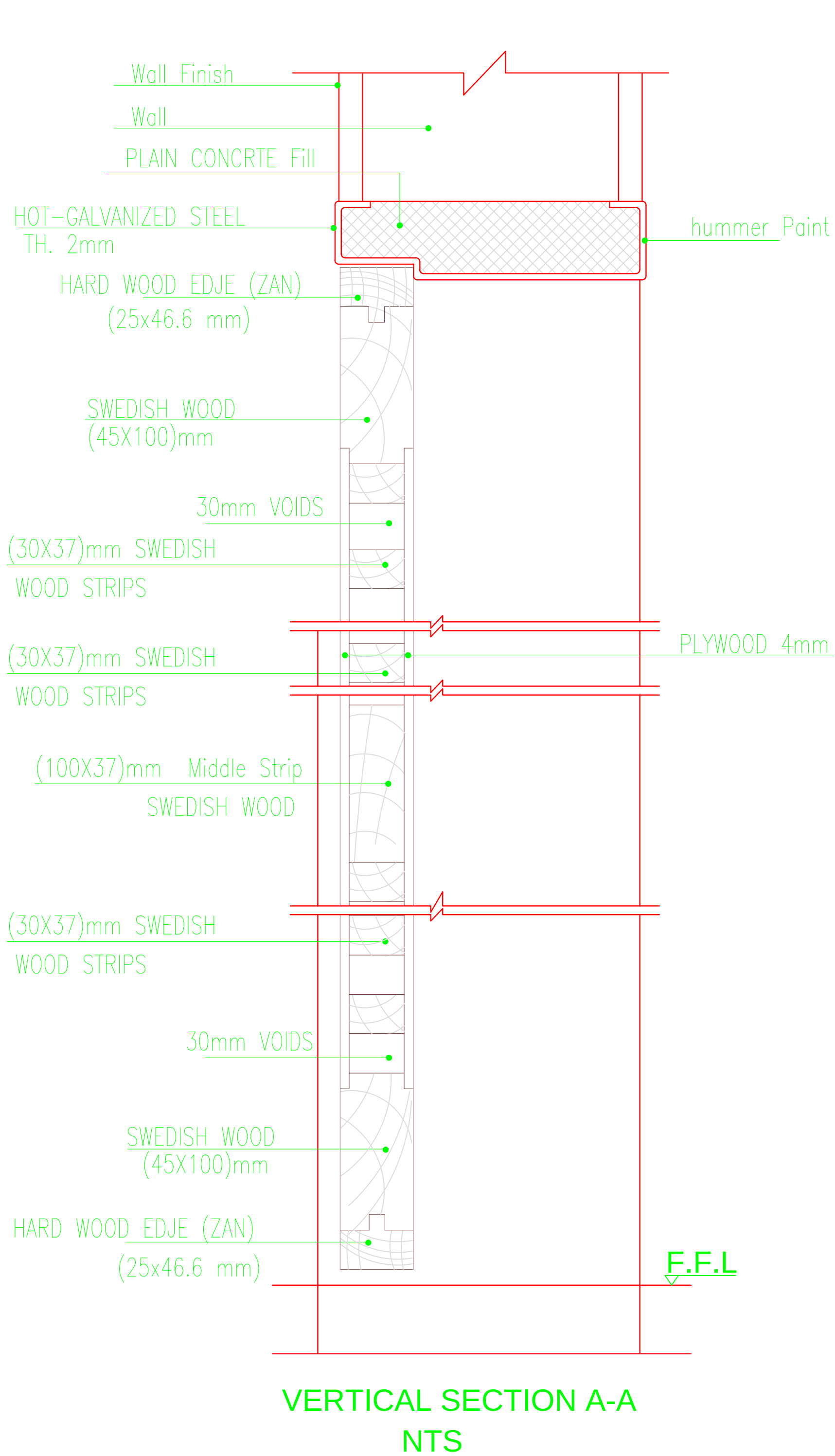
Design EMCC

Checked EMCC

Drawing NO. AD -07

Scale: AS DRAWINGS

Date: MAY . 2020



WOOD DOOR DETAILS

Notes:

Donor

 Norwegian Ministry of Foreign Affairs

Client

 UNDP

CONSULTANT

 EMCC

Project Name:
Provision of Detailed Design and Technical Assistance Services for the Construction of Solar Energy System for Khan Younis Waste Water Treatment Plant (KY WWTP)

RFP No. :
PAL- 0000093741

Drawing Title: Admin Building
WOOD DETAILS

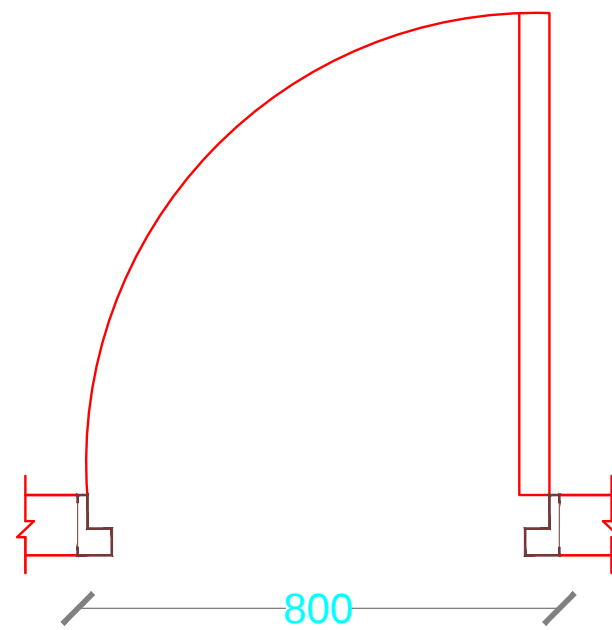
Design	EMCC
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Checked	EMCC
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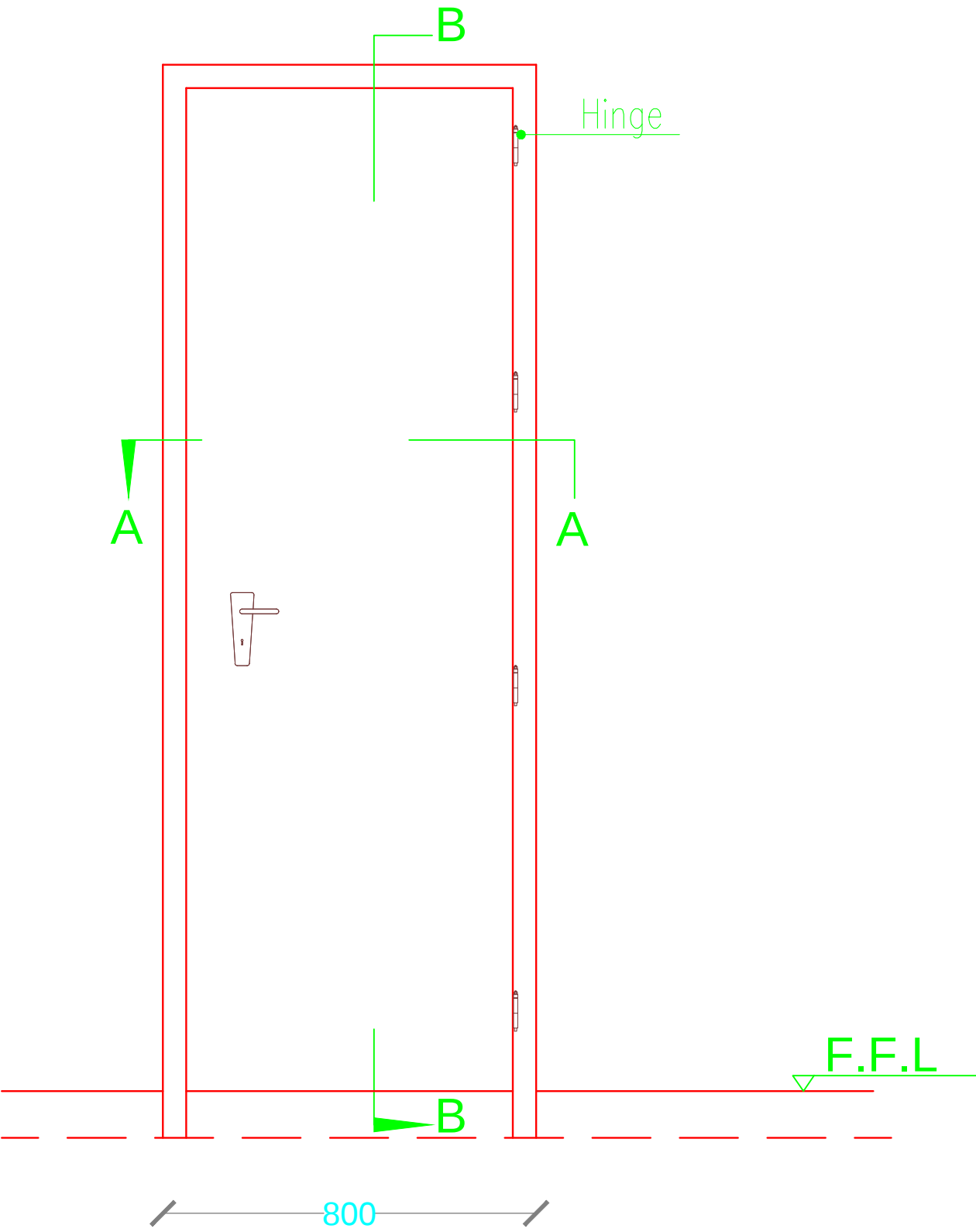
Drawing NO.	AD -08
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Scale:	AS DRAWINGS
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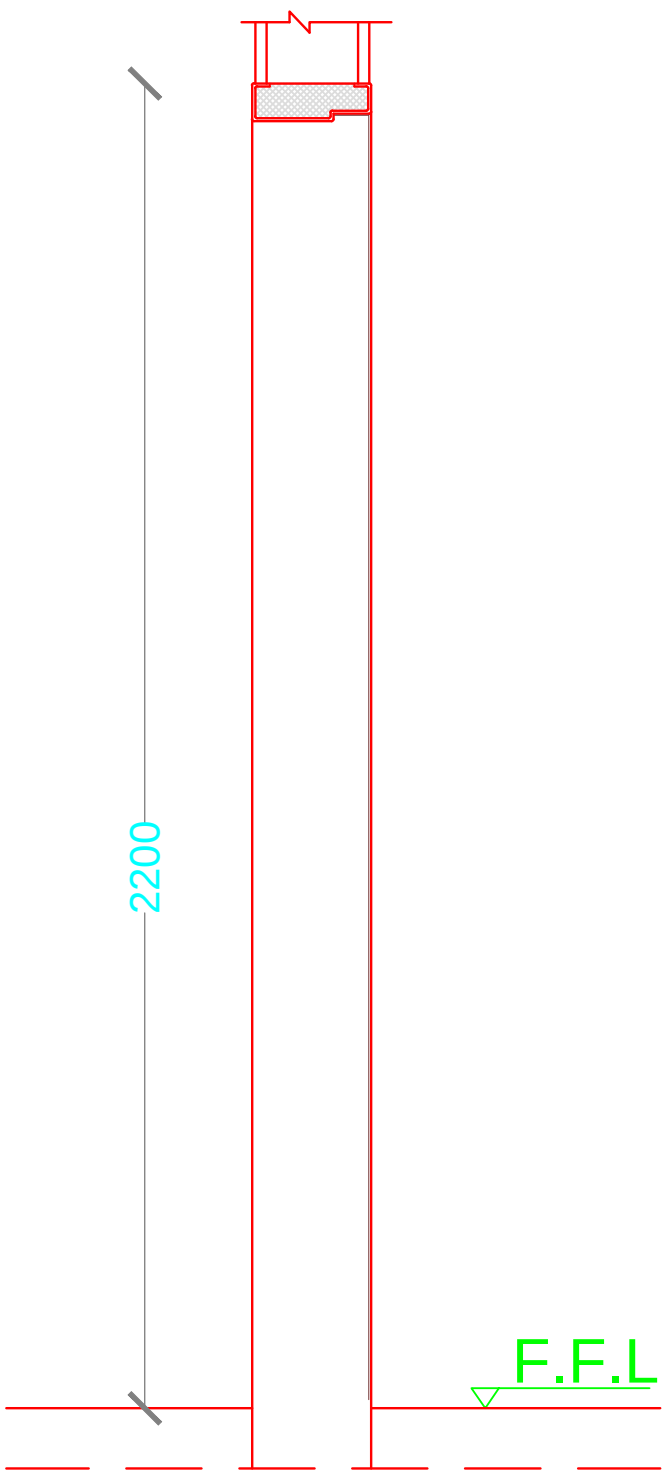
Date:	MAY. 2020
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SECTION A-A
Scale 1:25

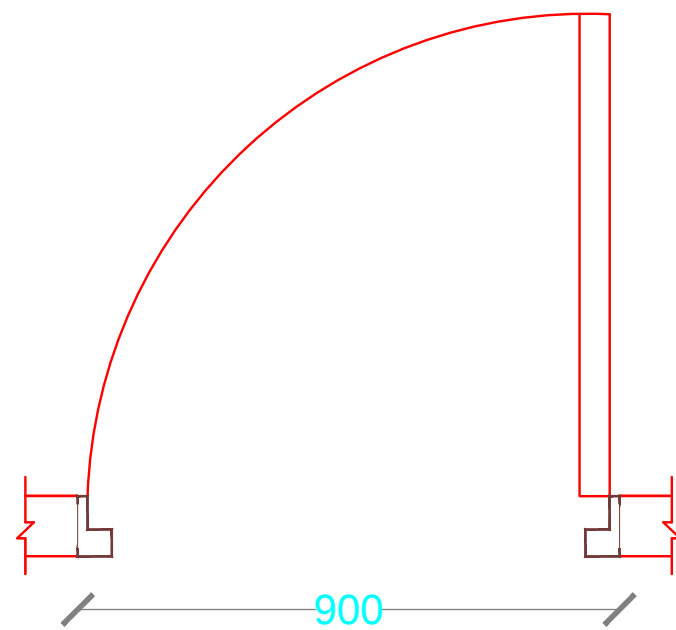


ELEVATION
Scale 1:25

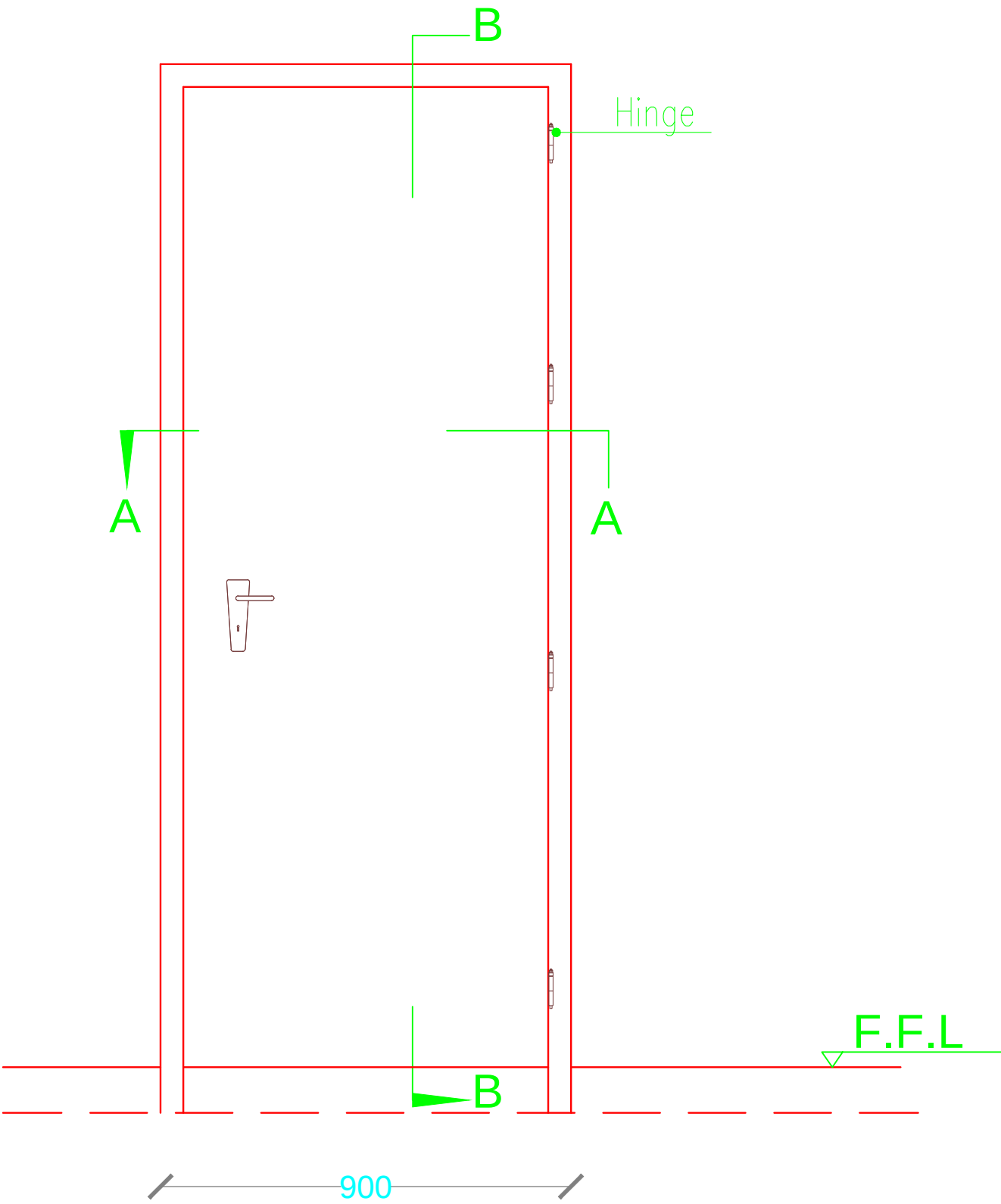


SECTION B-B
Scale 1:25

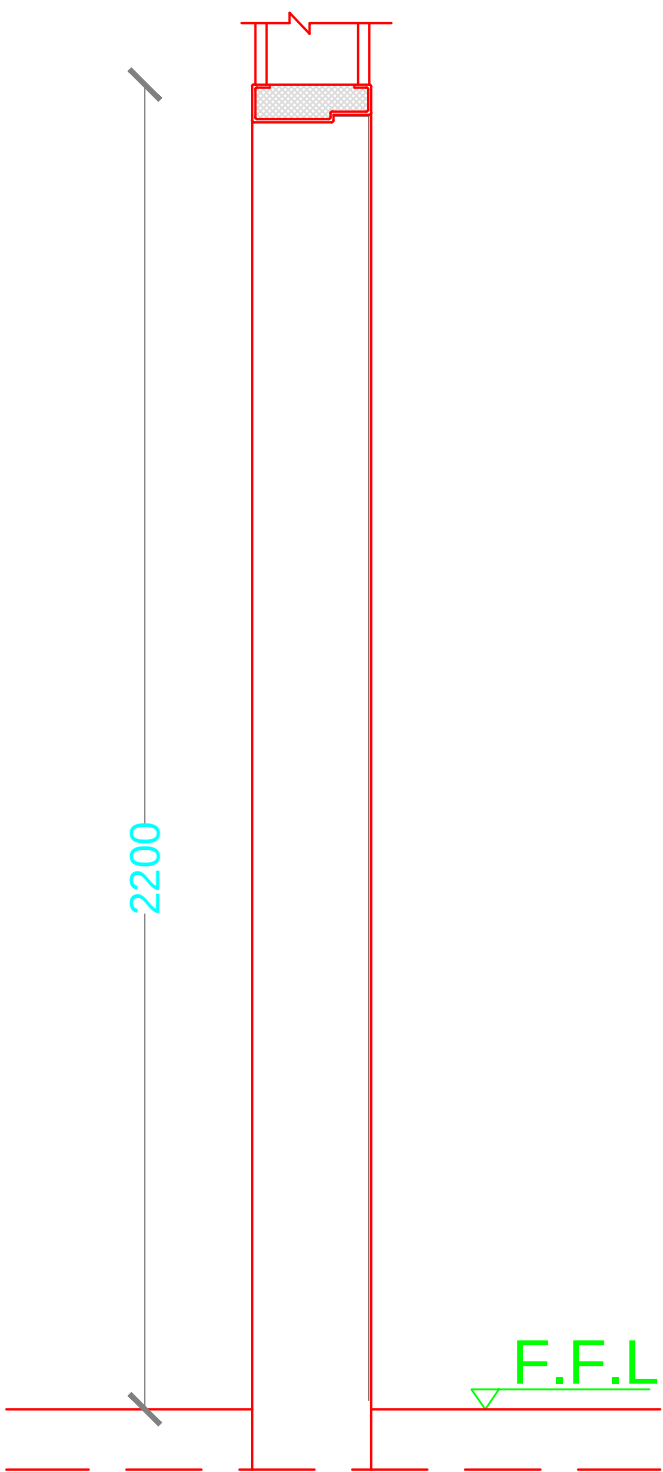
WOOD DOOR
WD 01



SECTION A-A
Scale 1:25



ELEVATION
Scale 1:25



SECTION B-B
Scale 1:25

WOOD DOOR
WD 02

Notes:

Donor



Norwegian Ministry
of Foreign Affairs

Client



CONSULTANT

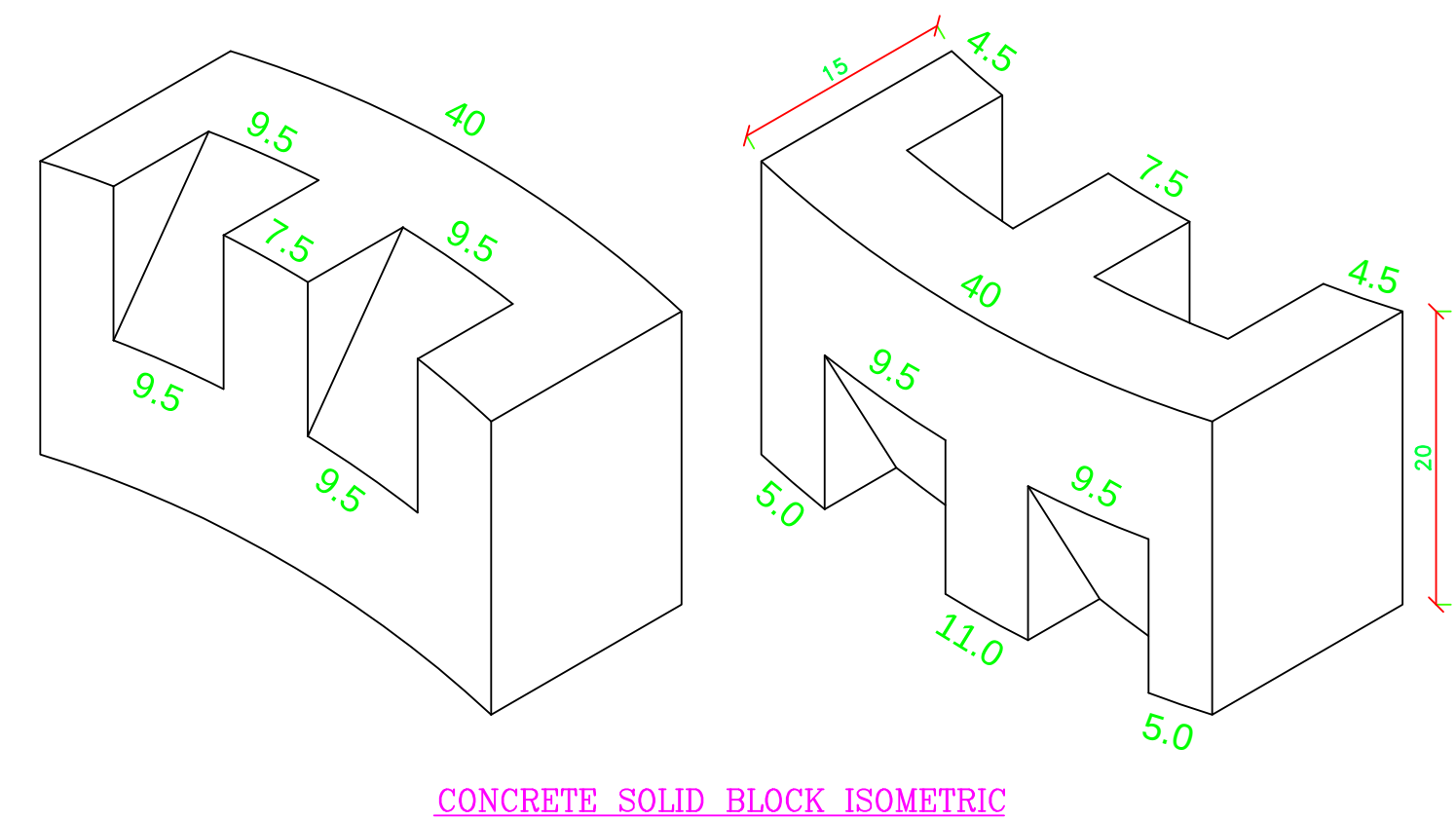
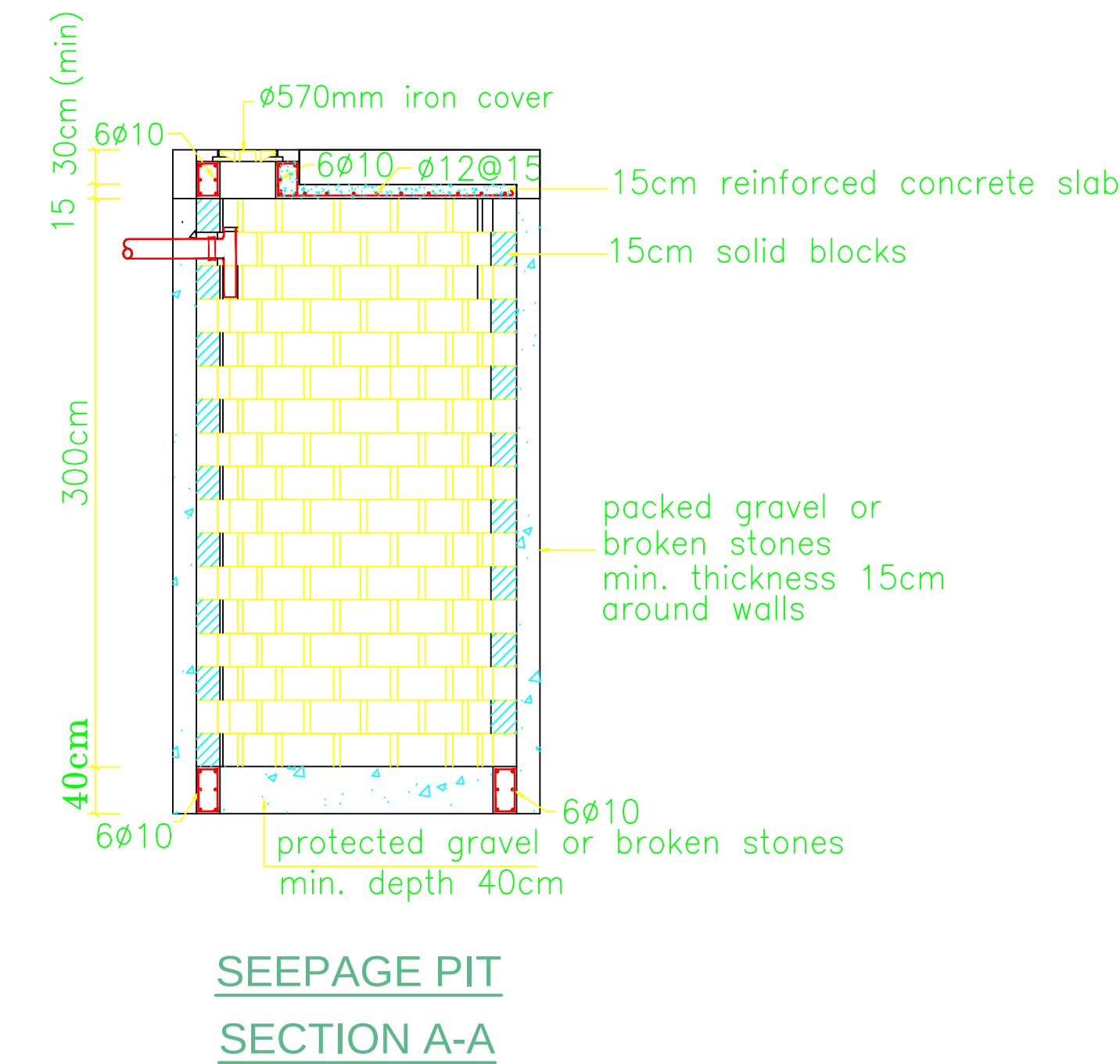
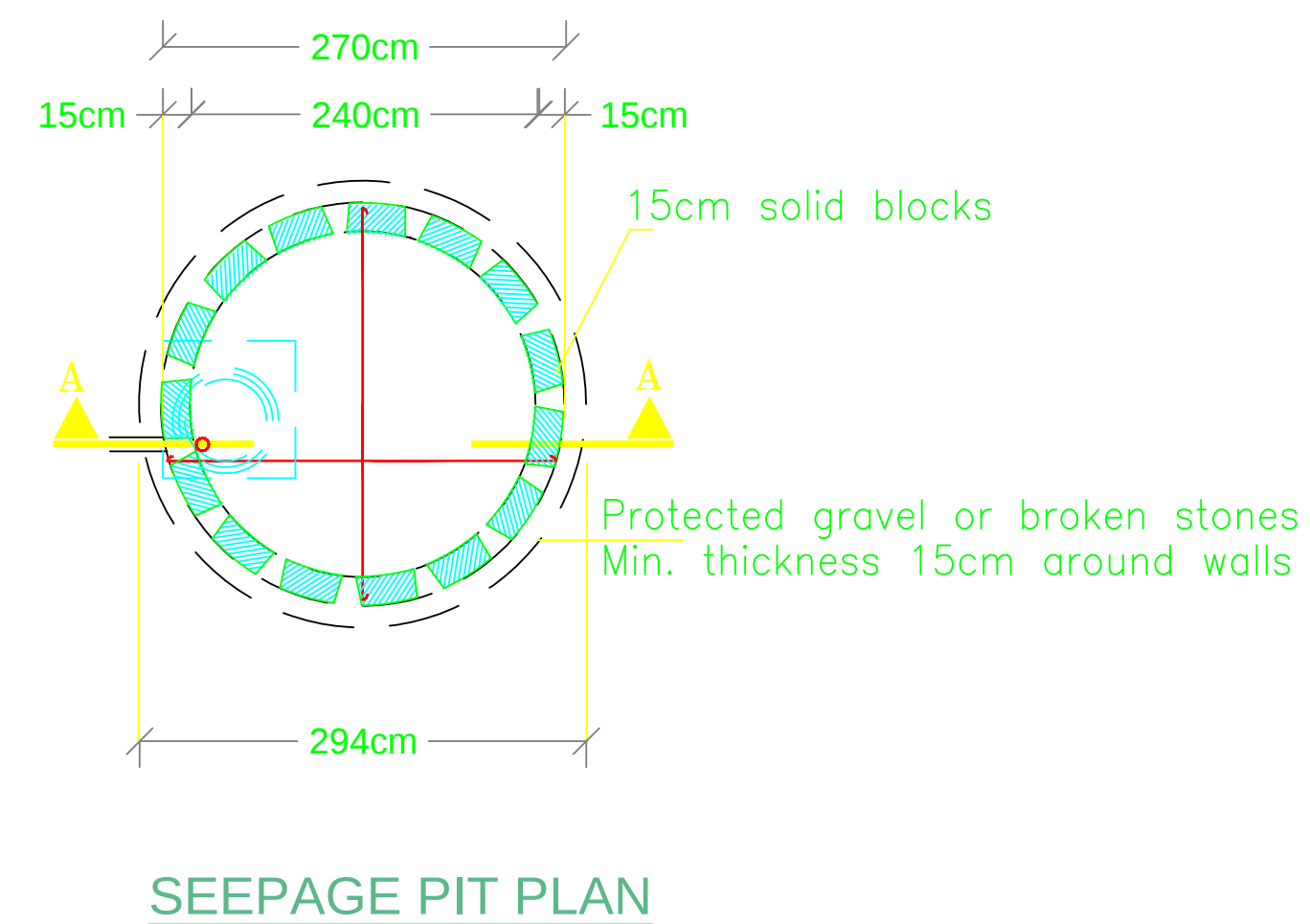
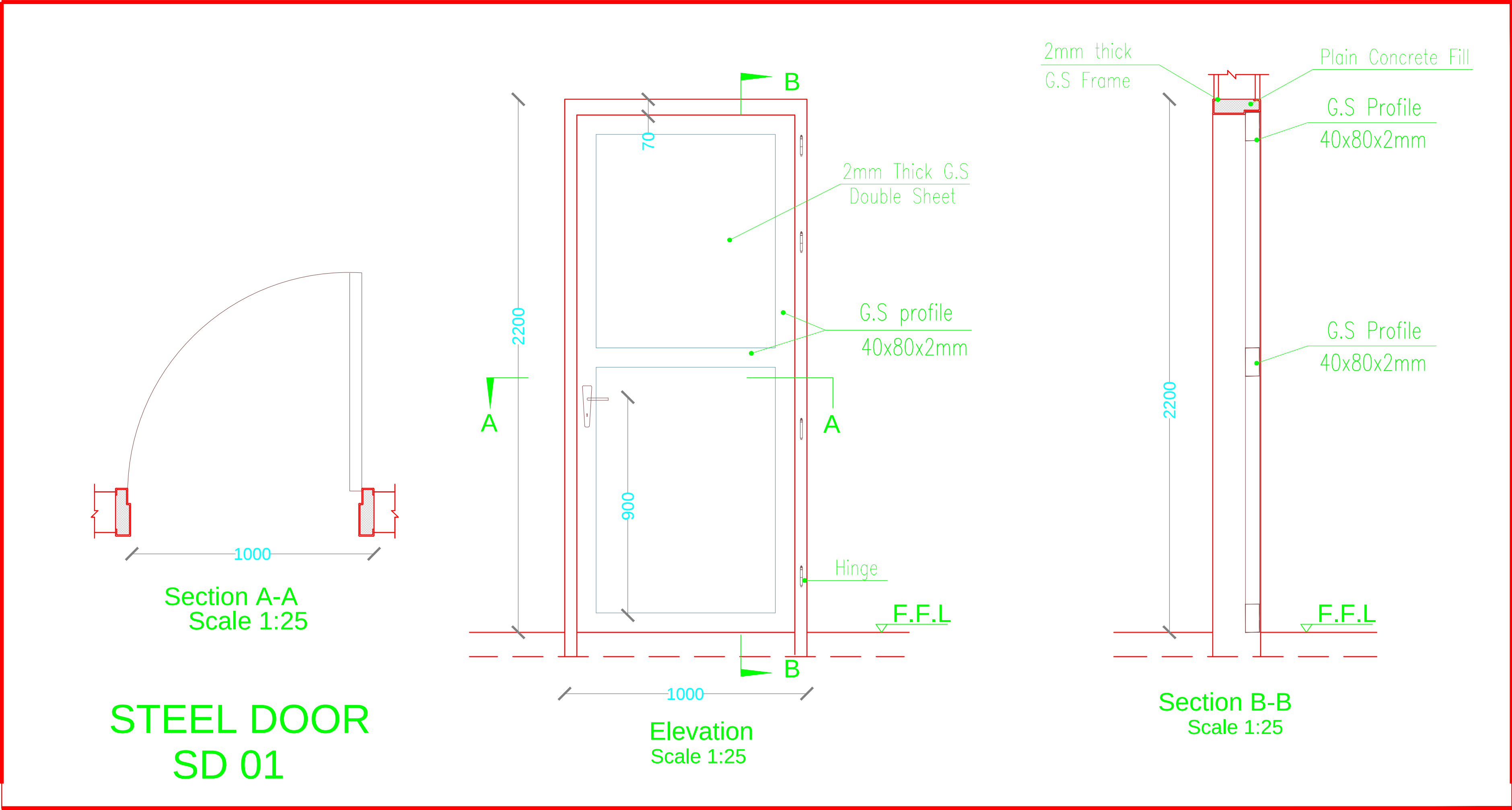


Project Name:
Provision of Detailed Design and Technical Assistance Services for the Construction of Solar Energy System for Khan Younis Waste Water Treatment Plant (KY WWTP)

RFP No. :
PAL- 0000093741

Drawing Title: Admin Building
WOOD DOOR DETAILS

Design	EMCC
Checked	EMCC
Drawing NO.	AD -09
Scale:	AS DRAWINGS
Date:	MAY . 2020



Notes:

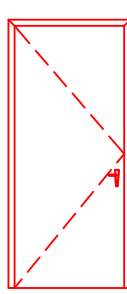
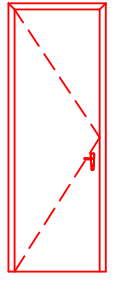
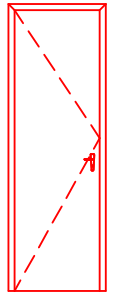


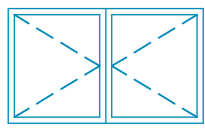
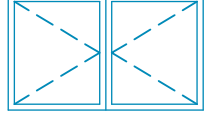
Project Name:
Provision of Detailed Design and Technical Assistance Services for the Construction of Solar Energy System for Khan Younis Waste Water Treatment Plant (KY WWTP)

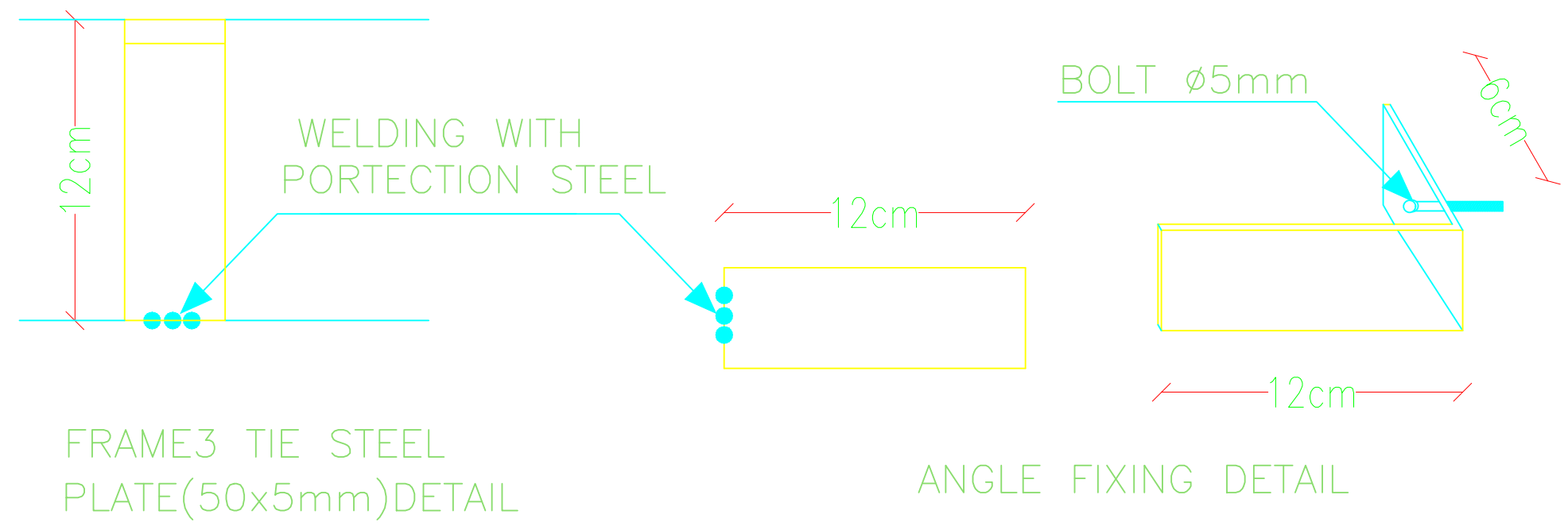
RFP No. :
PAL - 0000093741

Drawing Title: Admin Building
STEEL DOOR SEEPAGE PIT DETAILS

Design	EMCC
Checked	EMCC
Drawing NO.	AD -10
Scale:	AS DRAWINGS
Date:	MAY. 2020

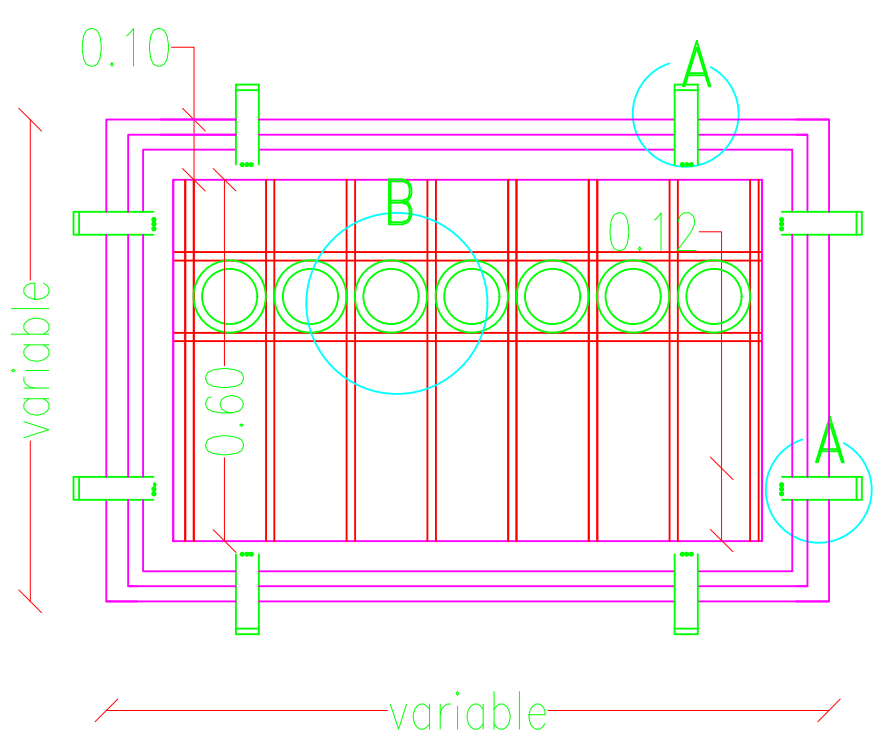
DOORS SCHEDULE					
TYPE	HEIGHT/CM	WIDTH/CM	QUANTITY	Describing	Elevation
	2200	1000	3	Steel Door	
	2200	800	1	Timber Door	
	2200	900	3	Timber Door	

WINDOWS SCHEDULE					
TYPE	HEIGHT/M	WIDTH/M	QUANTITY	Describing	Elevation
	1000	1600	7	Aluminum Window Type 7000 glass (Belgium) 4mm	
	800	800	1	Aluminum Window Type 7000 glass (Belgium) 4mm	
	600	600	1	Aluminum Window Type 4500 glass (Belgium) 4mm	

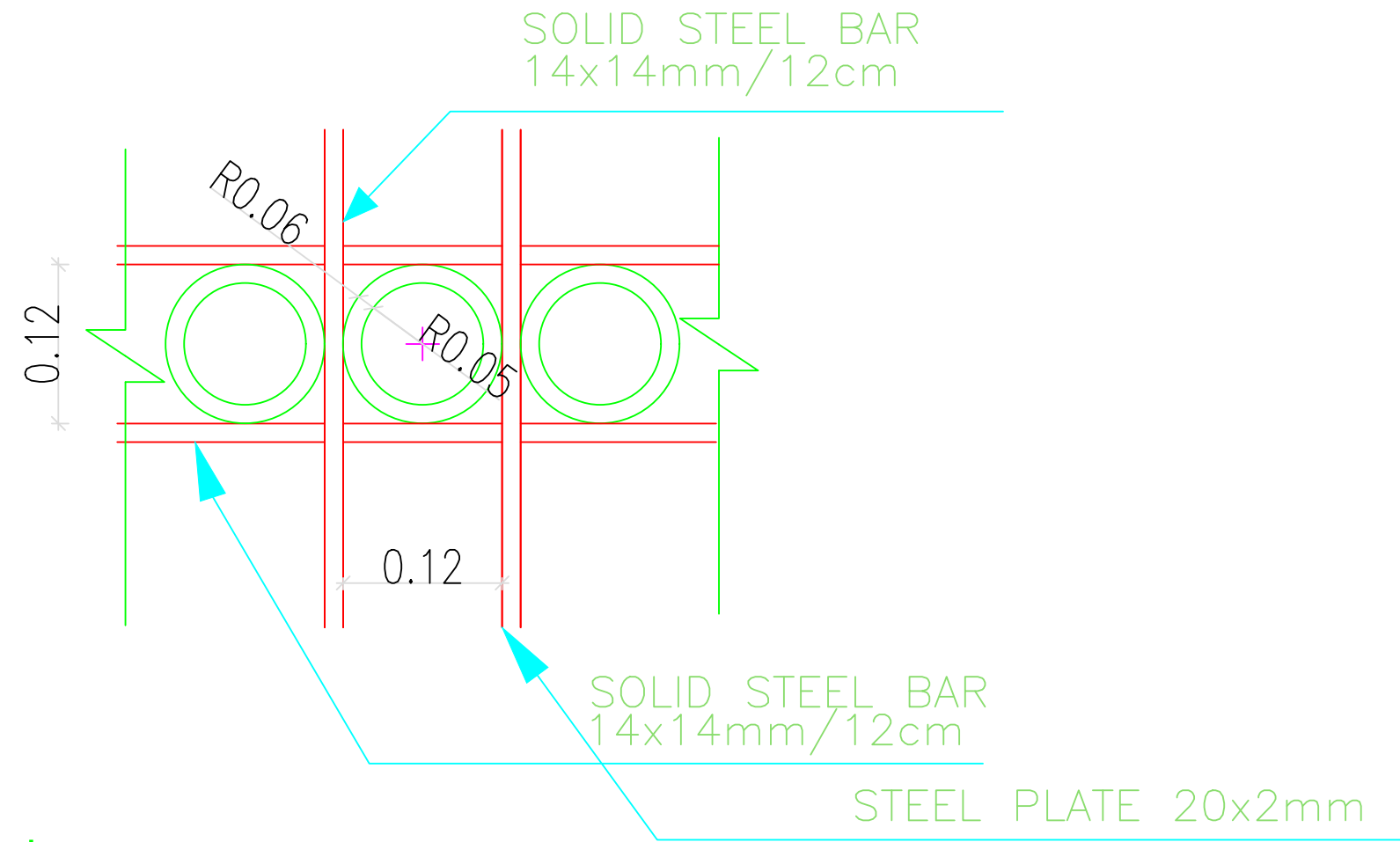


DETAIL (A)

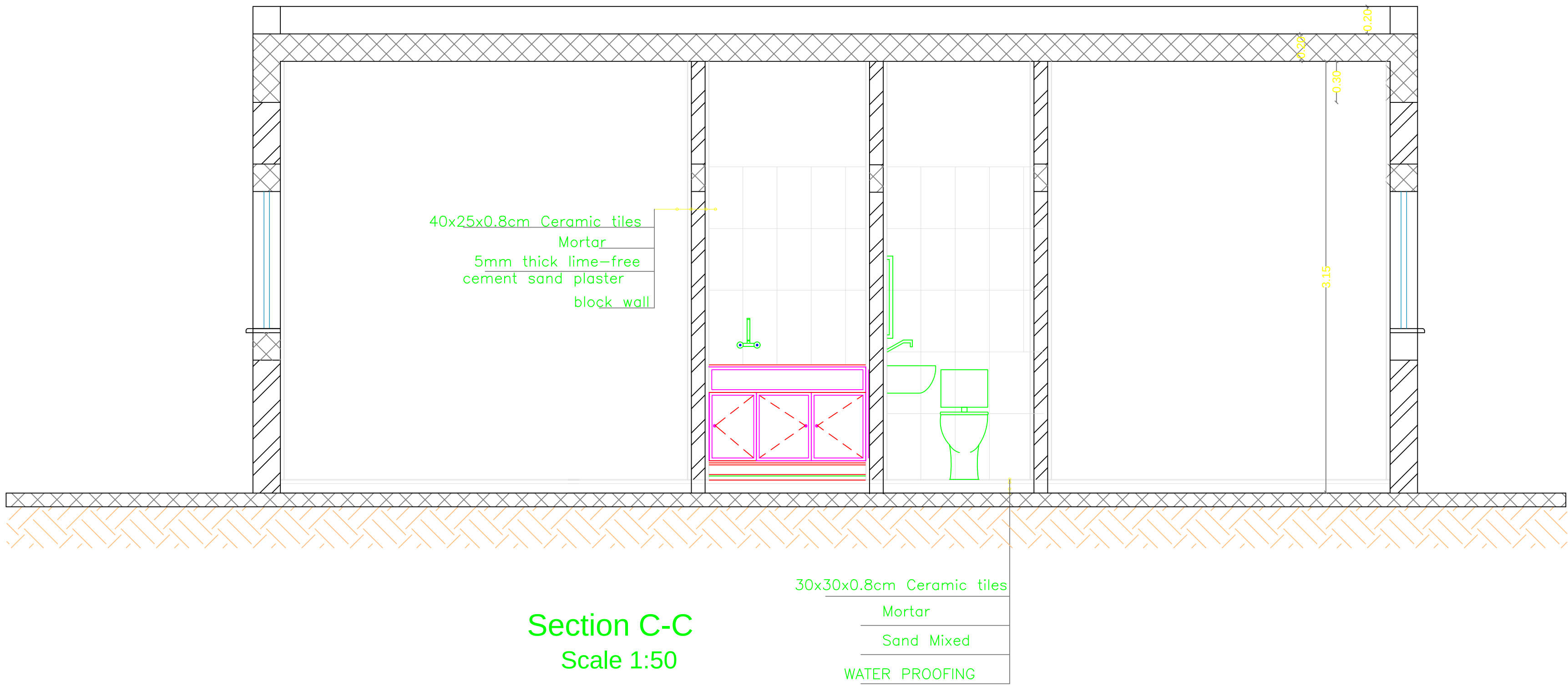
Detail of Steel Protection
Scale 1 :10



Note :
1- All works, Galvanized Steel and Hummer paint



DETAIL (B)



Section C-C
Scale 1:50

Notes:

Donor

 Norwegian Ministry of Foreign Affairs

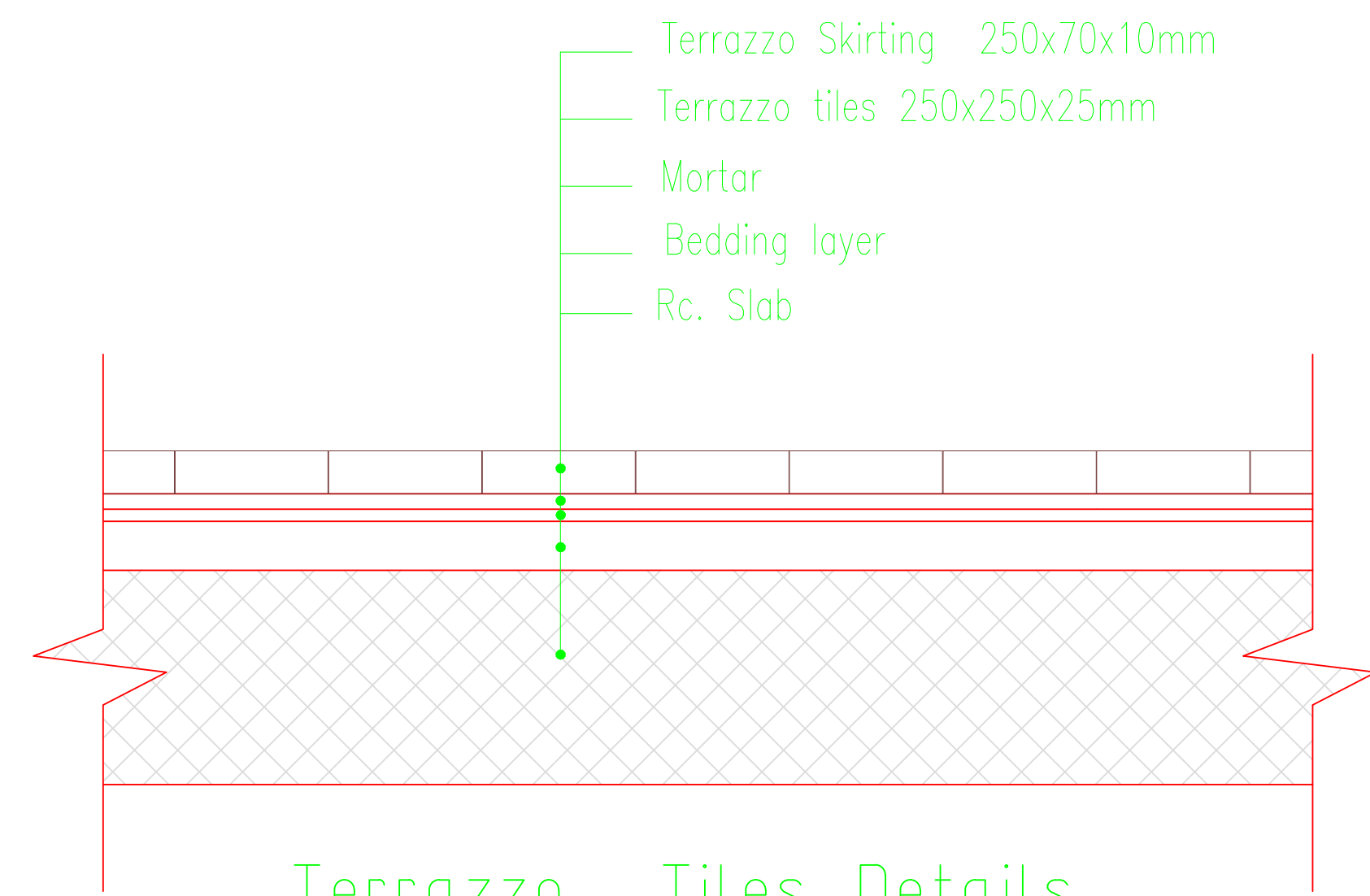
Client



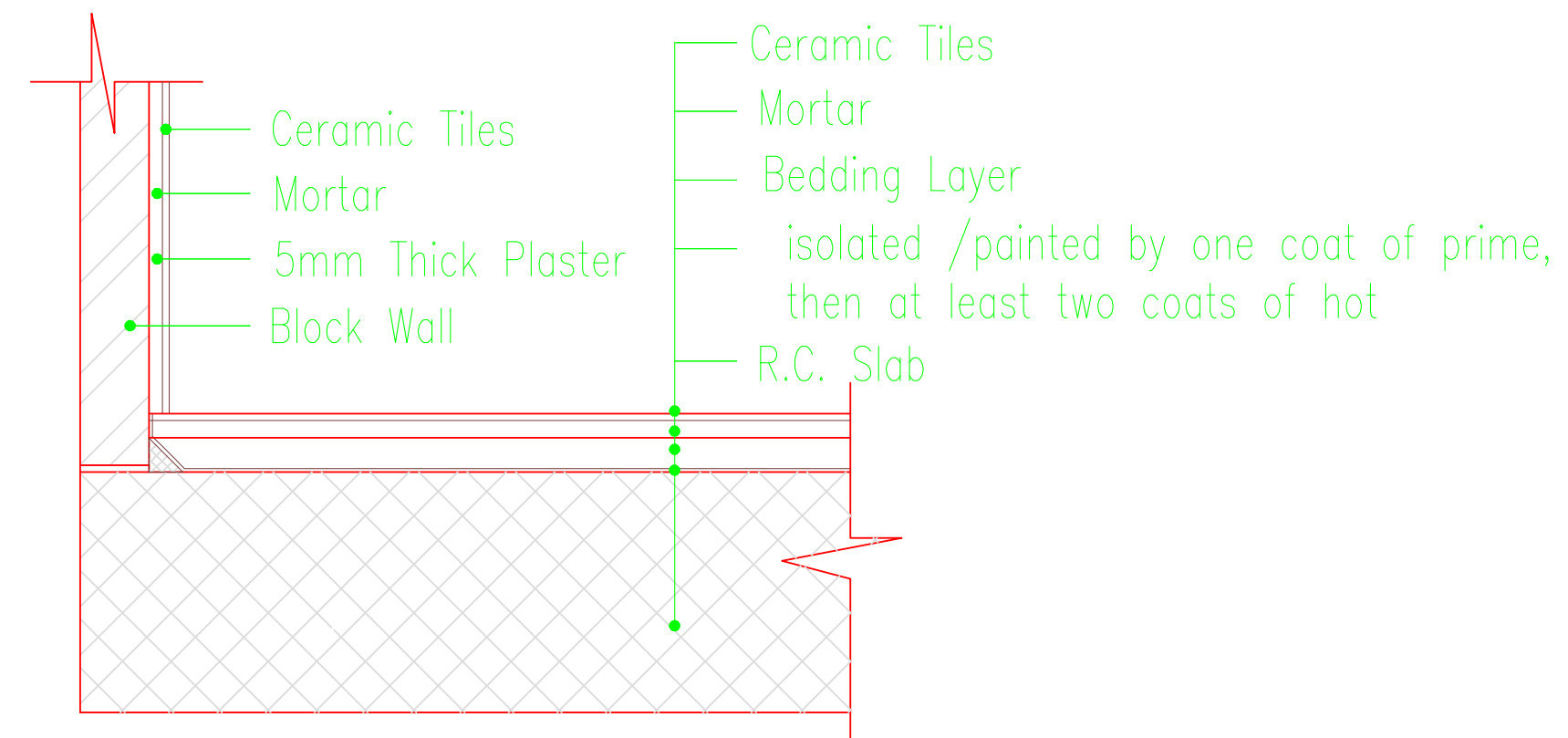
CONSULTANT



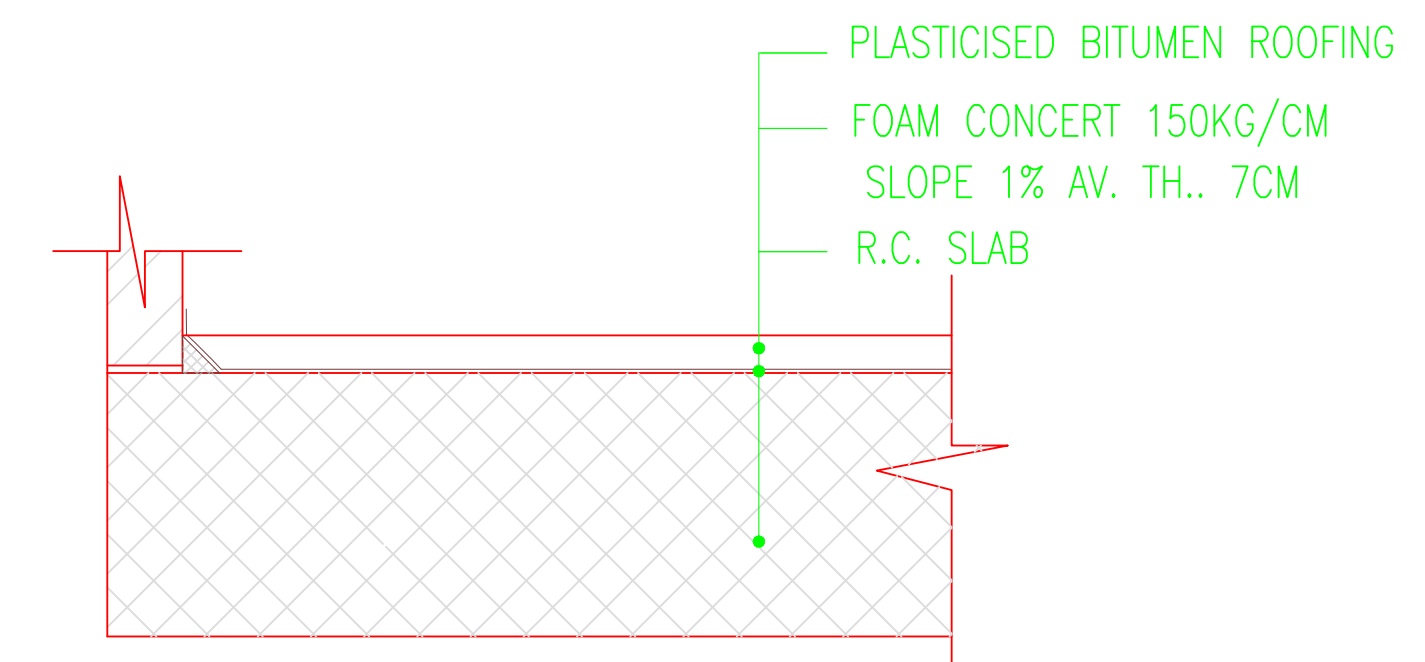
Project Name: Provision of Detailed Design and Technical Assistance Services for the Construction of Solar Energy System for Khan Younis Waste Water Treatment Plant (KY WWTP)	
RFP No. :	PAL- 0000093741
Drawing Title: Admin Building DOORS AND WINDOWS TABLE &DETAILS	
Design	EMCC
Checked	EMCC
Drawing NO.	AD -11
Scale:	AS DRAWINGS
Date:	MAY . 2020



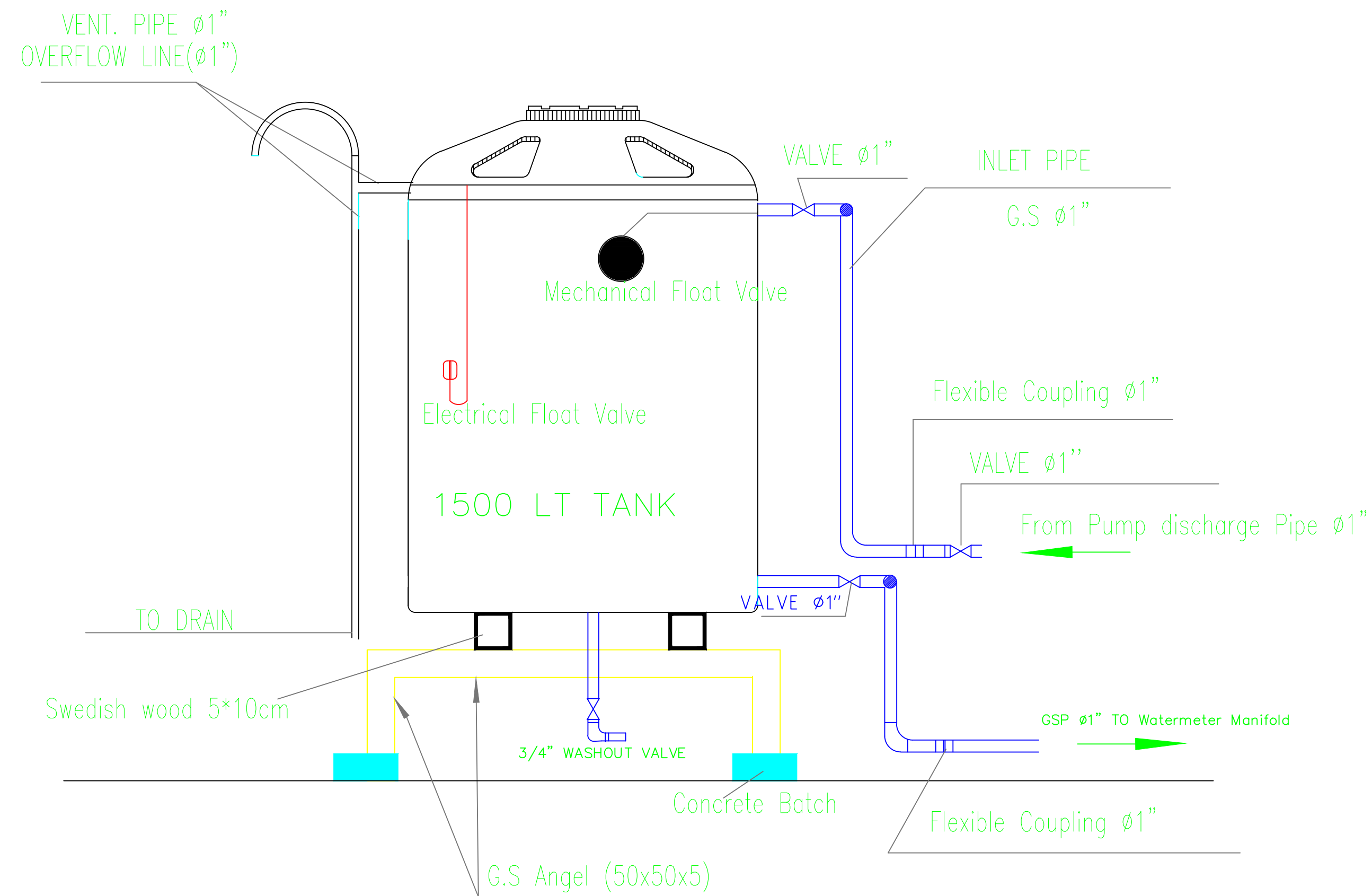
Terrazzo Tiles Details
N.T.S



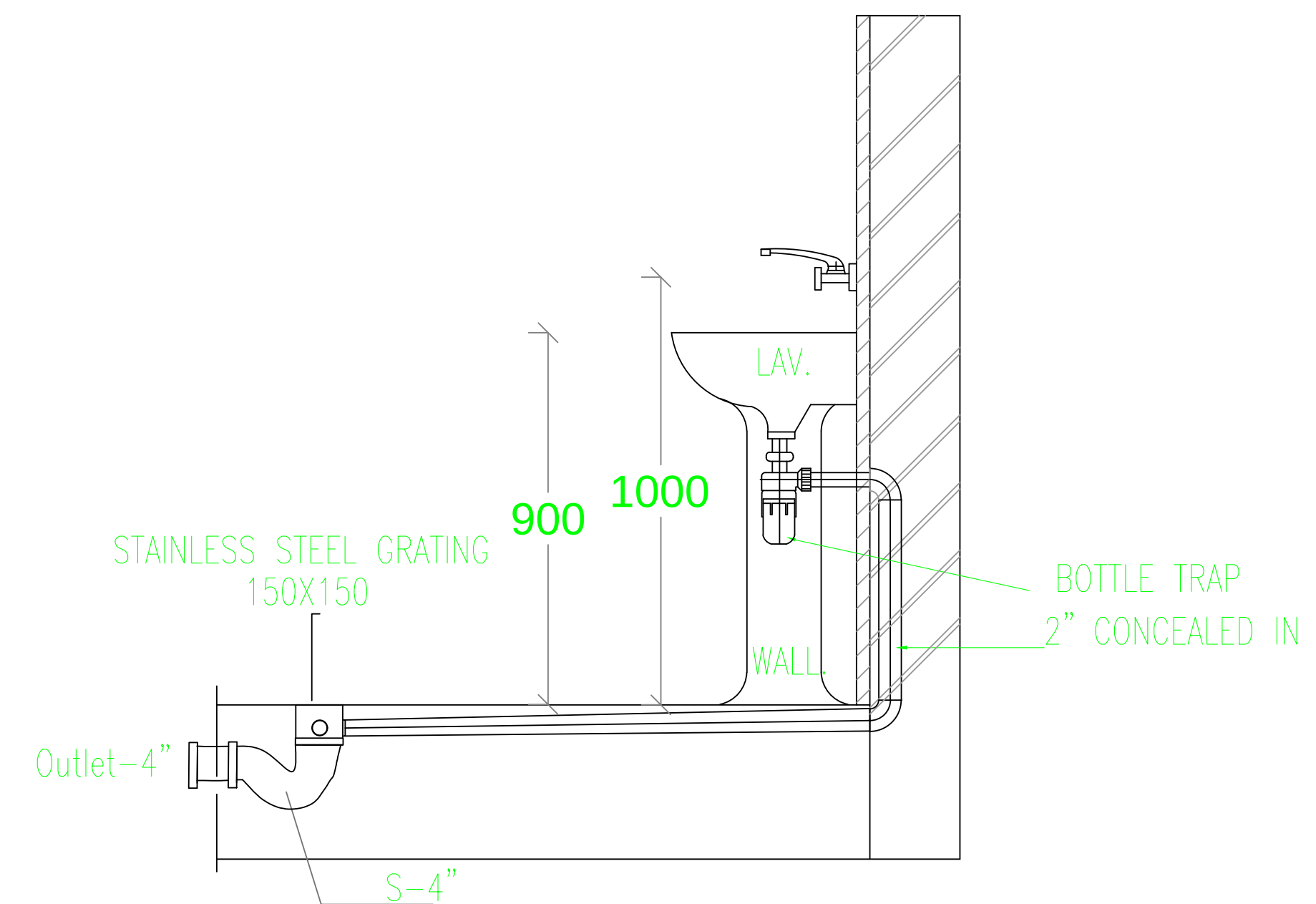
Typical Ceramic Details
N.T.S



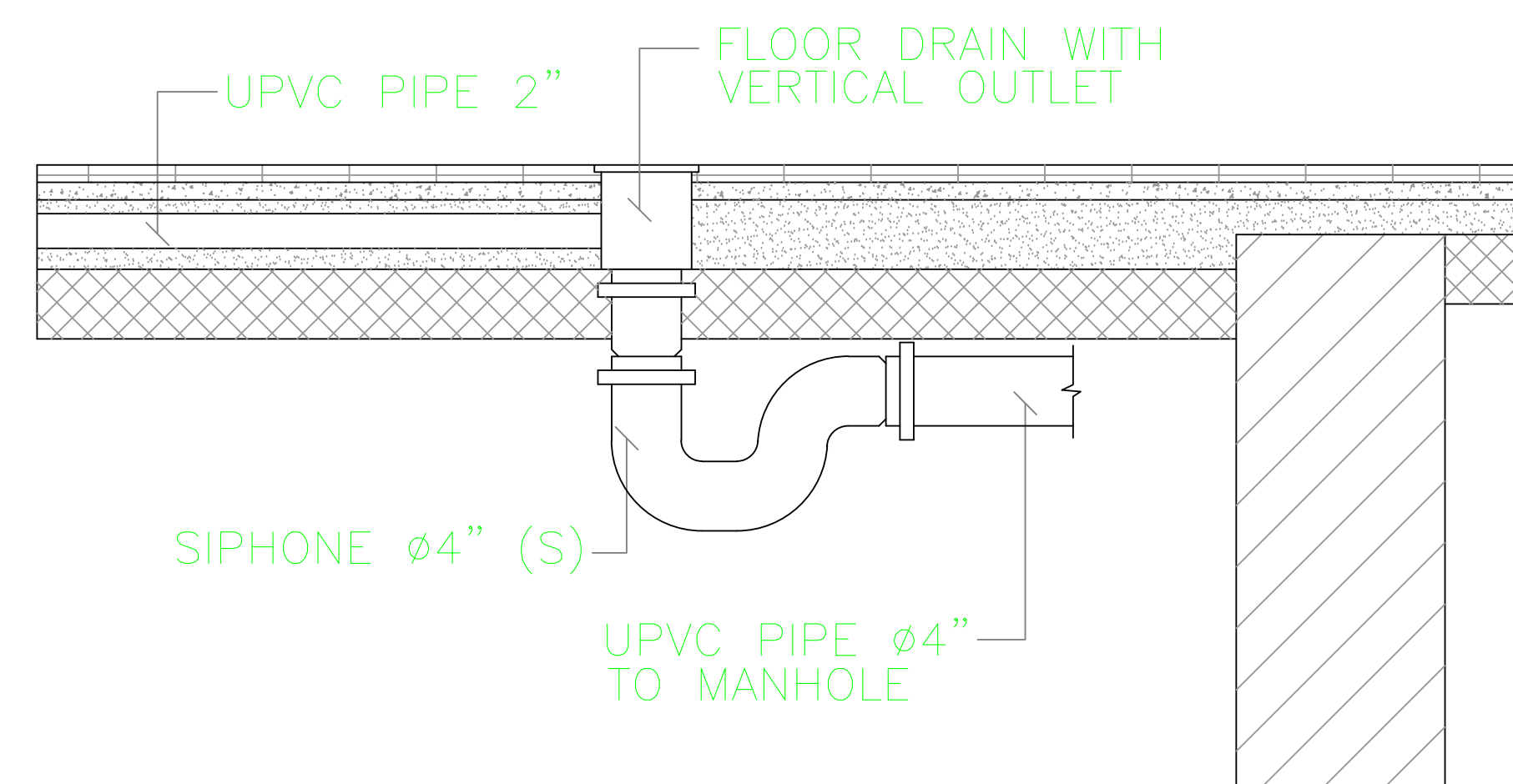
Typical Roof Details
N.T.S



ROOF COLD WATER TANKS & CONNECTIONS.



TYPICAL FLOOR DRAIN CONNECTIONS



FLOOR DRAIN INSTALLATION

Notes:

Donor

Norwegian Ministry
 of Foreign Affairs

Client

UN
 DIP

CONSULTANT

EMCC

Project Name:

Provision of Detailed Design and Technical Assistance Services for the Construction of Solar Energy System for Khan Younis Waste Water Treatment Plant (KY WWTP)

RFP No.:

PAL- 0000093741

Drawing Title: Admin Building
GENERAL DETAILS

Design

EMCC

Checked

EMCC

Drawing NO.

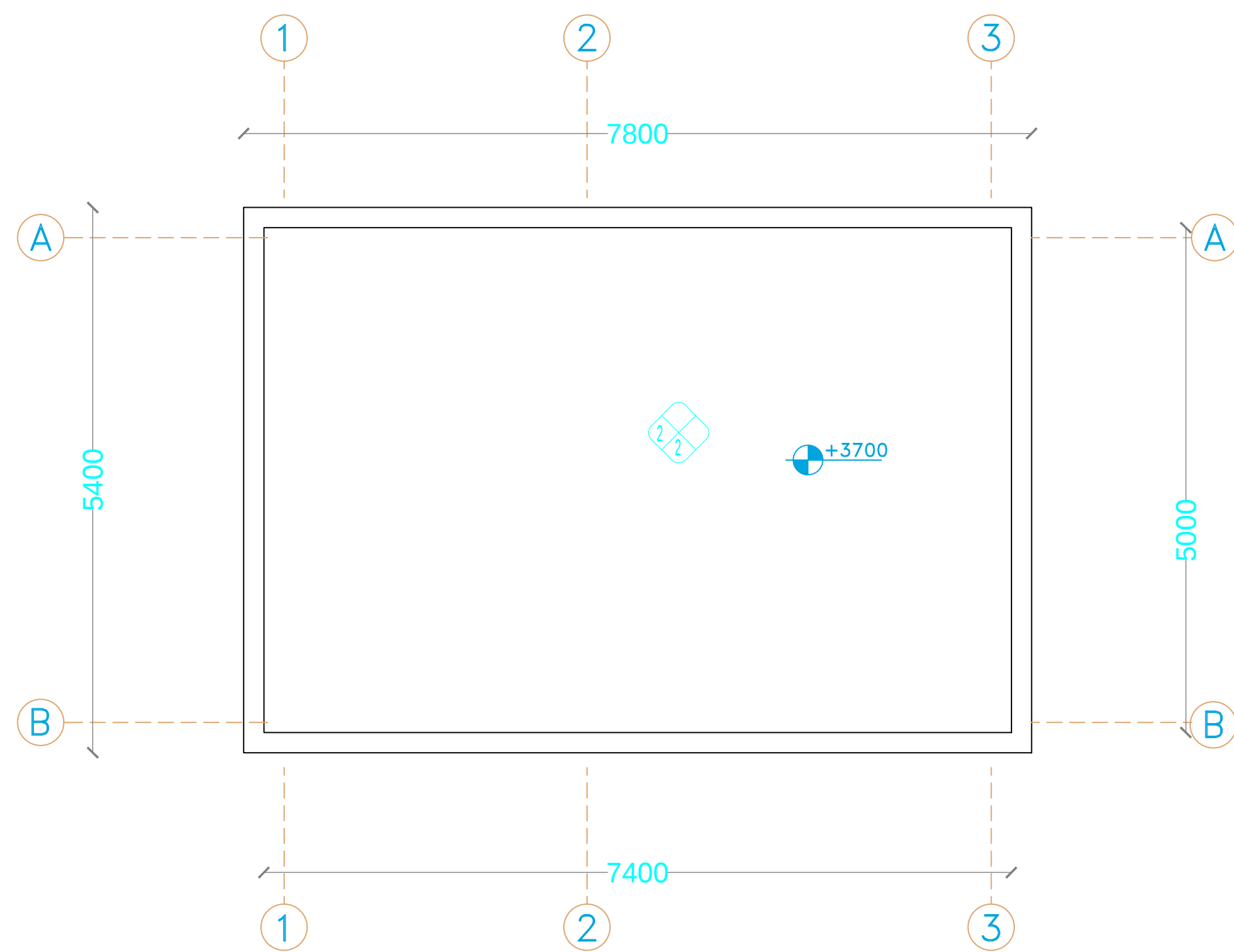
AD -12

Scale:

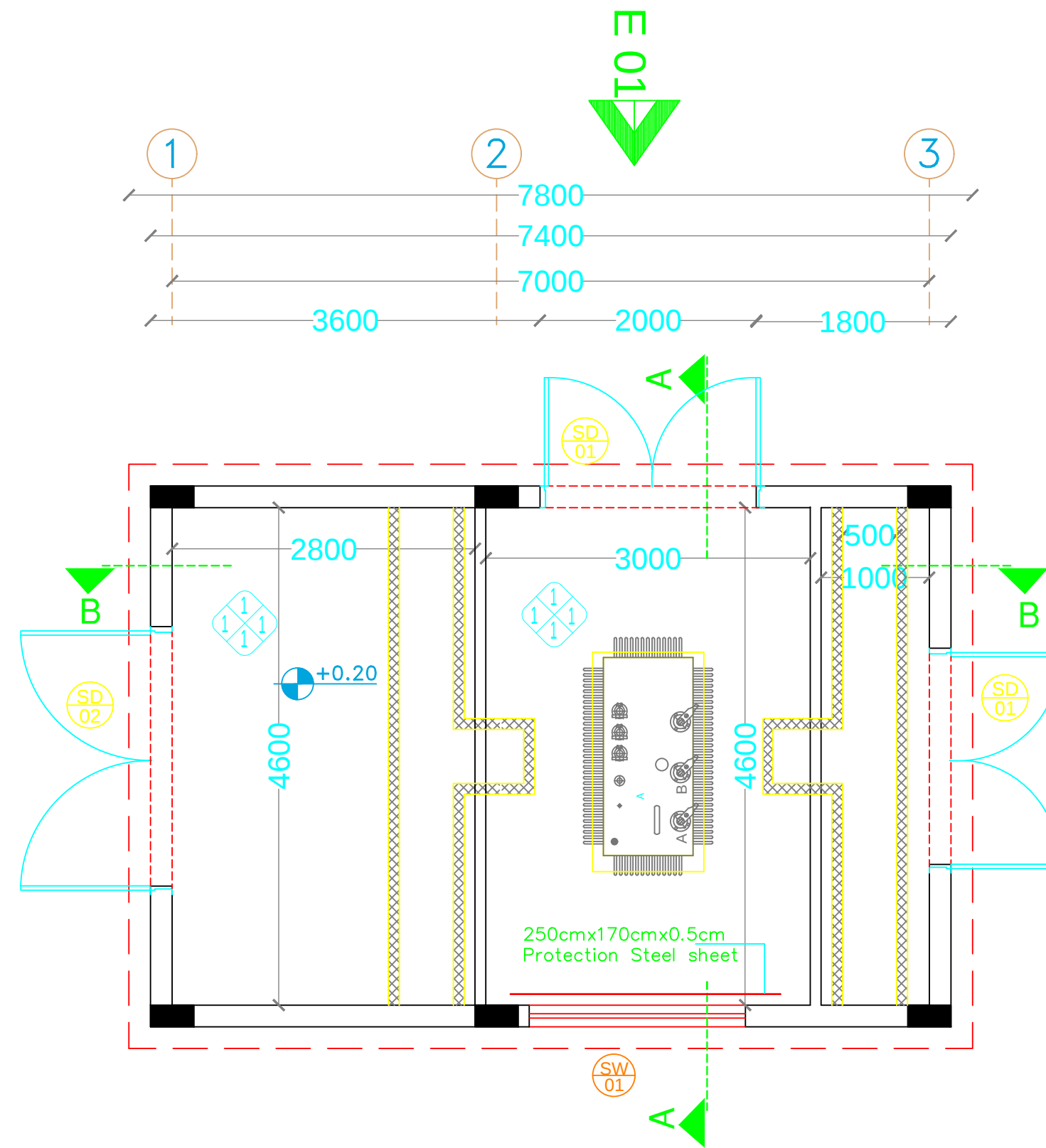
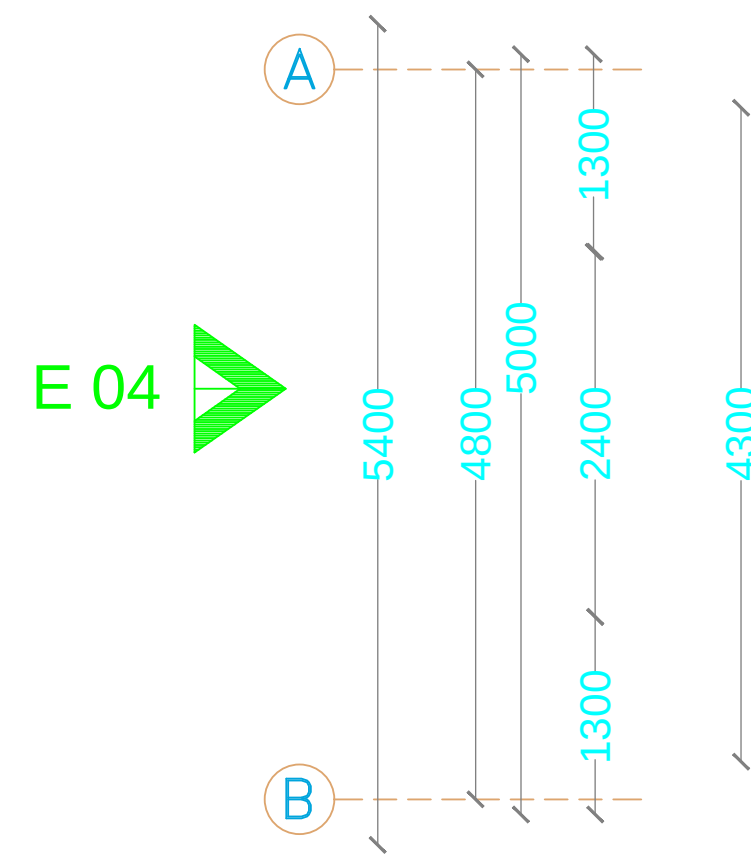
AS DRAWINGS

Date:

MAY. 2020



Roof Floor



Ground Floor

Notes:	
TABLE OF FINISHES:	
FLOORS:	
1	Terrazzo tiles 25x25cm
2	Light weight insulation concrete
3	Bitumen Membrane 4mm thick
CEILING:	
1	Plaster & Paint (Supercryle Paint)
WALLS:	
1	Plaster & Paint (Super Pandrole&Supercryle Paint)
2	PLASTER & OIKOS FINISH
BASE:(SKIRTING)	
1	Terrazzo Skirting 7x25x1.5cm
2	Bitumen Membrane 4mm thick



Project Name:
Provision of Detailed Design and Technical Assistance Services for the Construction of Solar Energy System for Khan Younis Waste Water Treatment Plant (KY WWTP)

RFP No.:
PAL- 0000093741

Drawing Title: Transformer room
Ground Floor Plan

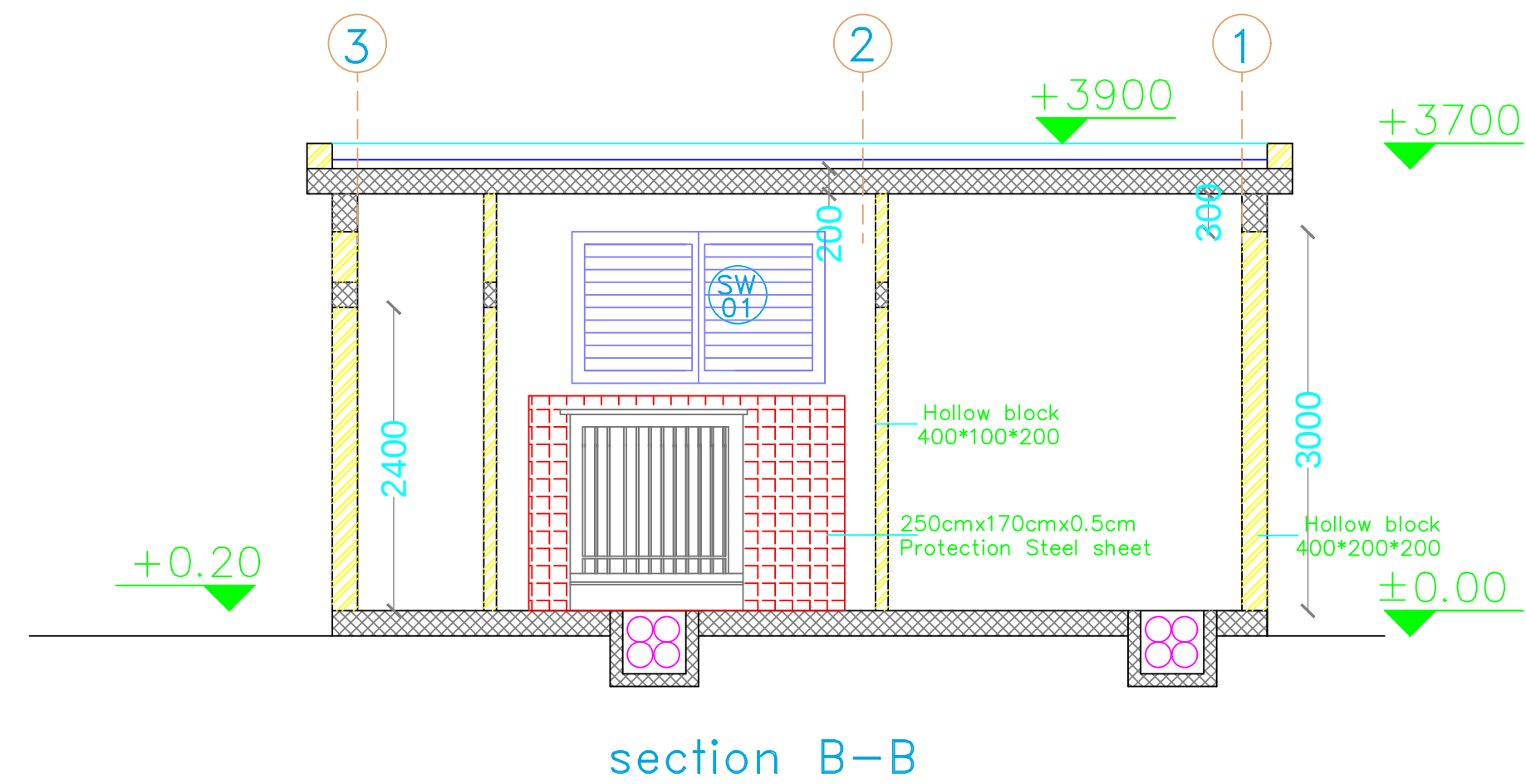
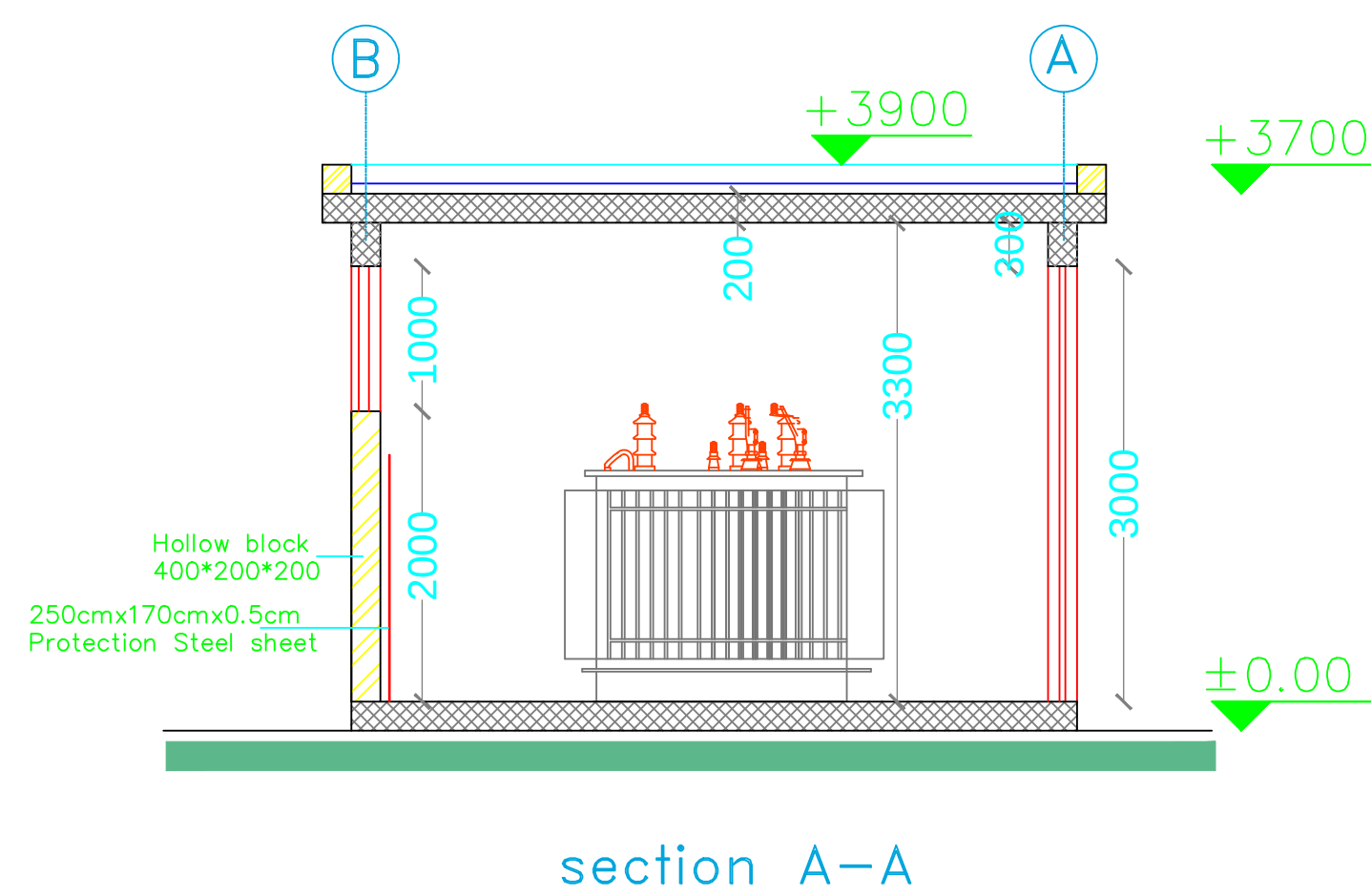
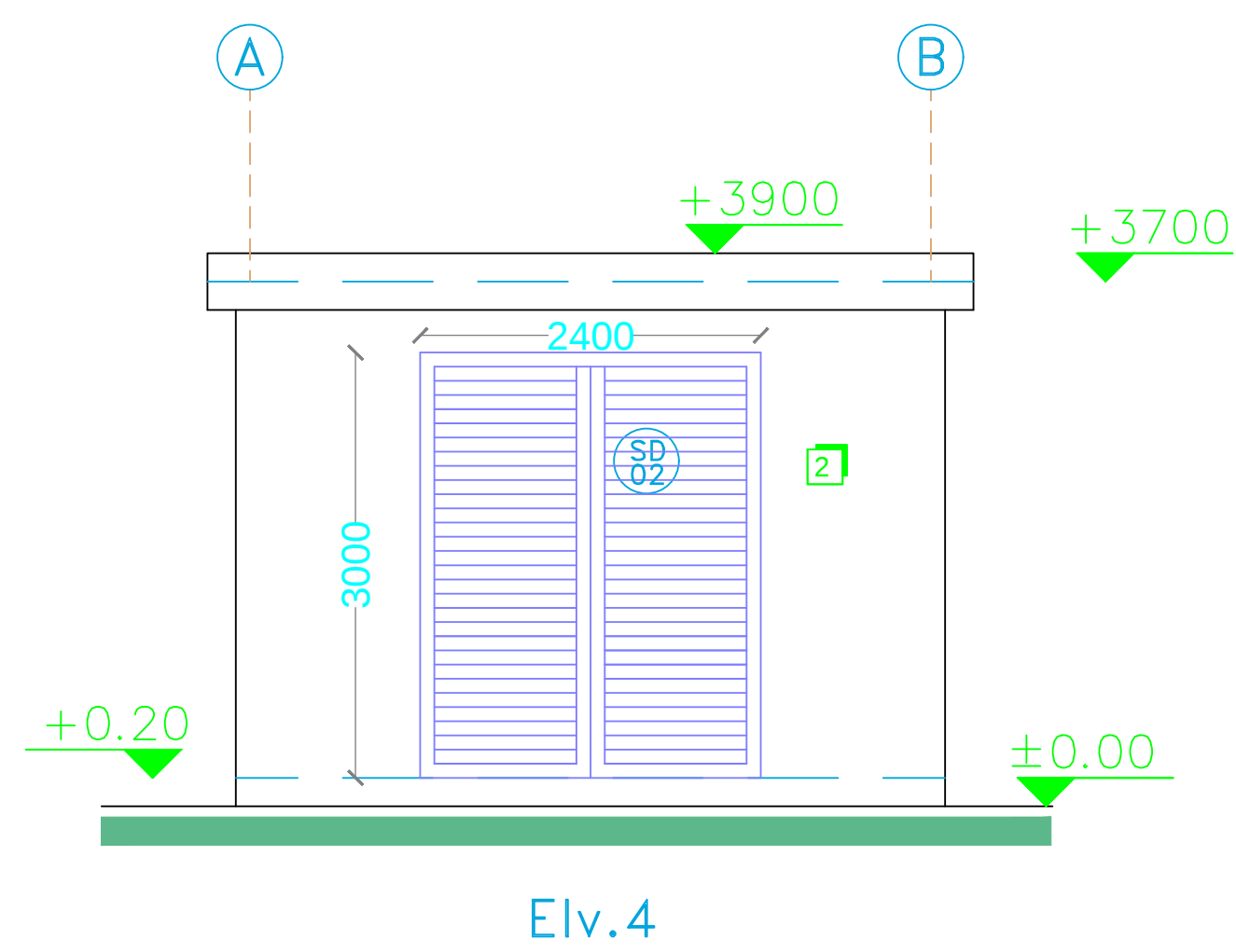
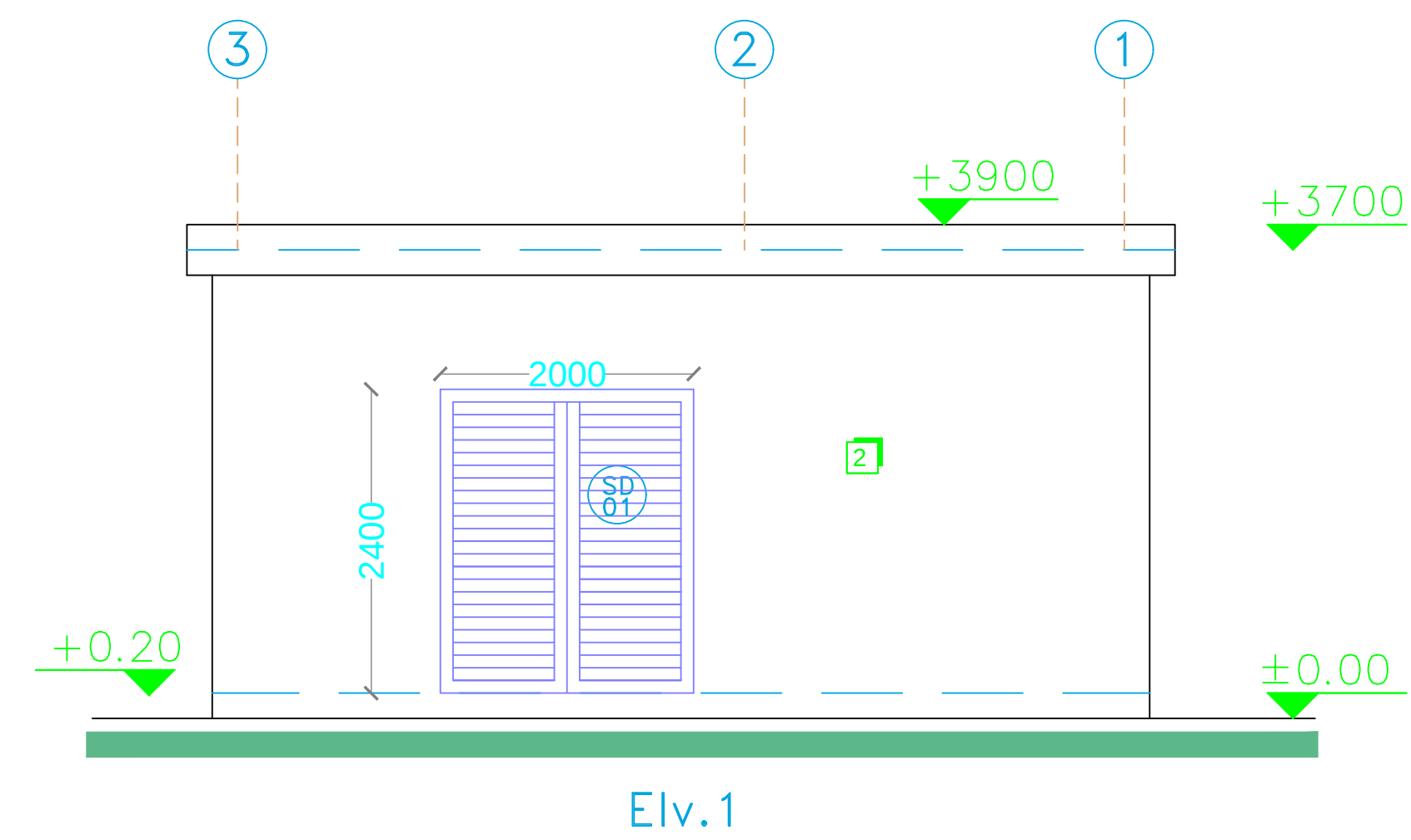
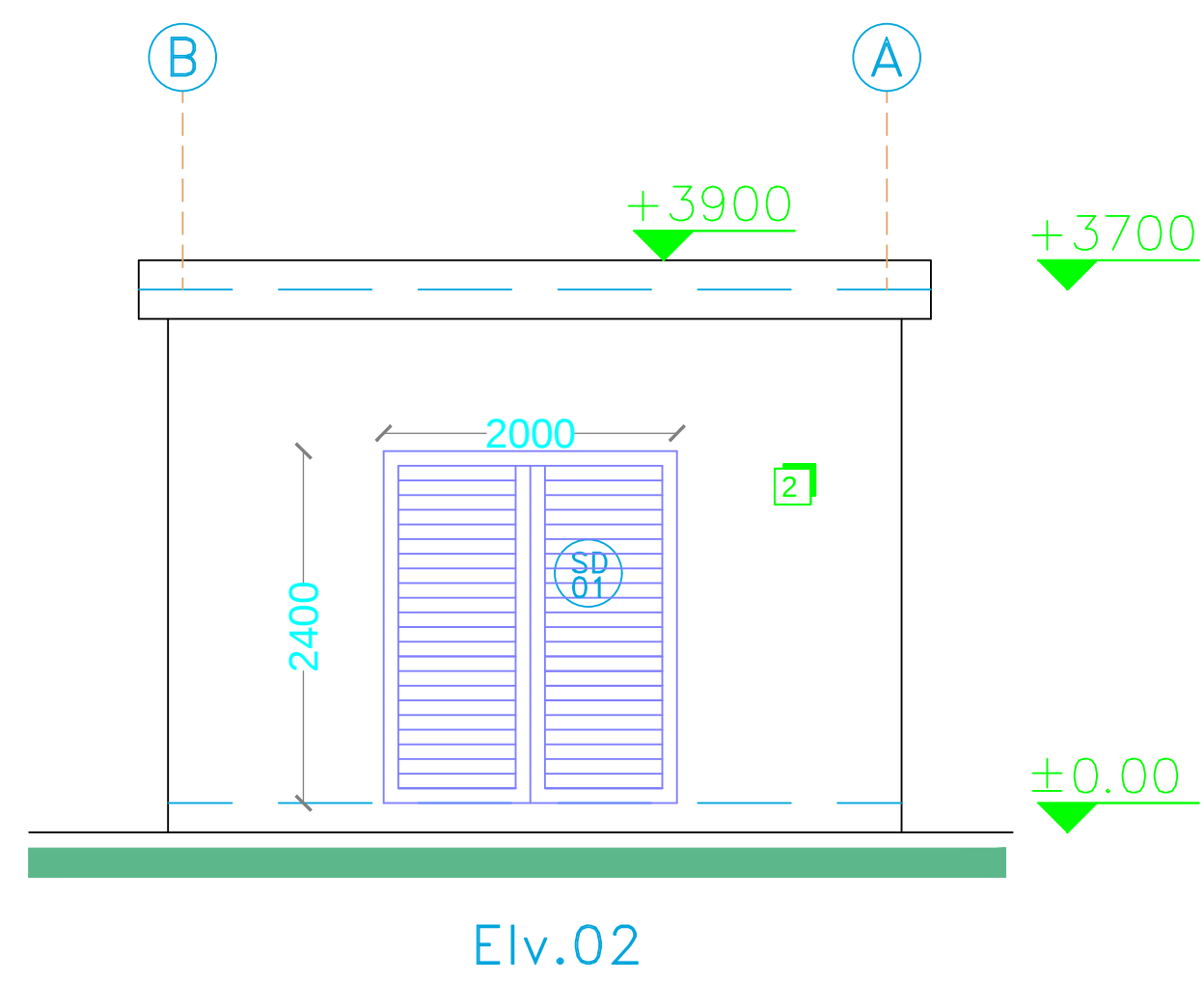
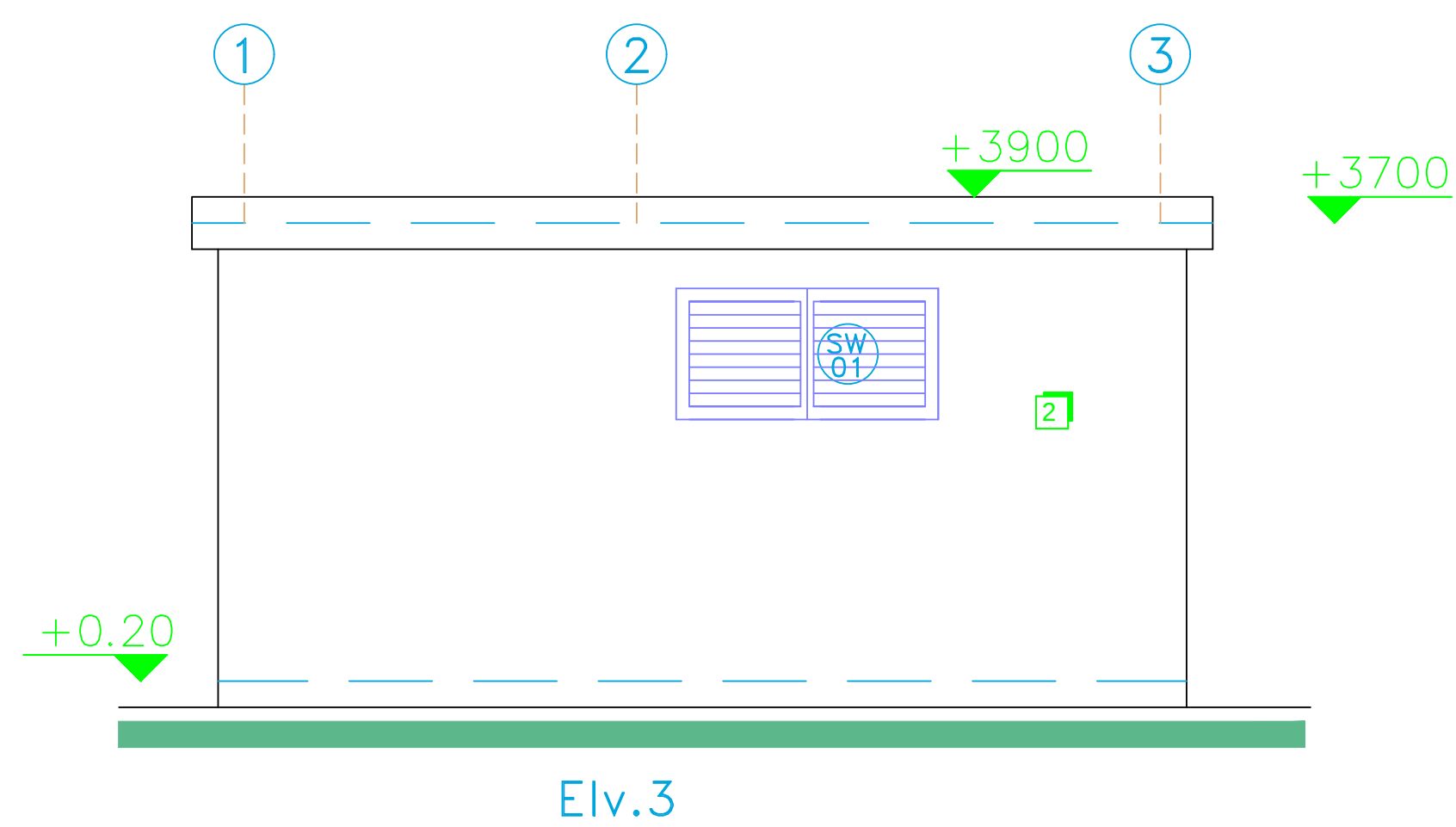
Design EMCC

Checked EMCC

Drawing NO. TR -01

Scale: 1 : 100

Date: MAY. 2020



Notes:	
TABLE OF FINISHES:	
FLOORS:	
1	Terrazzo tiles 25x25cm
2	Light weight insulation concrete Bitumen Membrane 4mm thick
CEILING:	
1	Plaster & Paint (Supercryle Paint)
WALLS:	
1	Plaster & Paint (Super Pandrole&Supercryle Paint)
2	PLASTER & OIKOS FINISH
BASE:(SKIRTING)	
1	Terrazzo Skirting 7x25x1.5cm
2	Foam concrete + Bitumen Membrane 4mm thick

Donor



Norwegian Ministry of Foreign Affairs

Client



CONSULTANT



Engineering & Mangement Consulting Center

Project Name:
Provision of Detailed Design and Technical Assistance Services for the Construction of Solar Energy System for Khan Younis Waste Water Treatment Plant (KY WWTP)

RFP No.:
PAL- 0000093741

Drawing Title:
Transformer room
Elevations & Sections

Design
EMCC

Checked
EMCC

Drawing NO.
TR -02

Scale:
1 : 100

Date:
MAY. 2020

ALL DIMENSIONS ARE IN (mm) UNLESS OTHERWISE MENTIONED.

CONCRETE GRADE

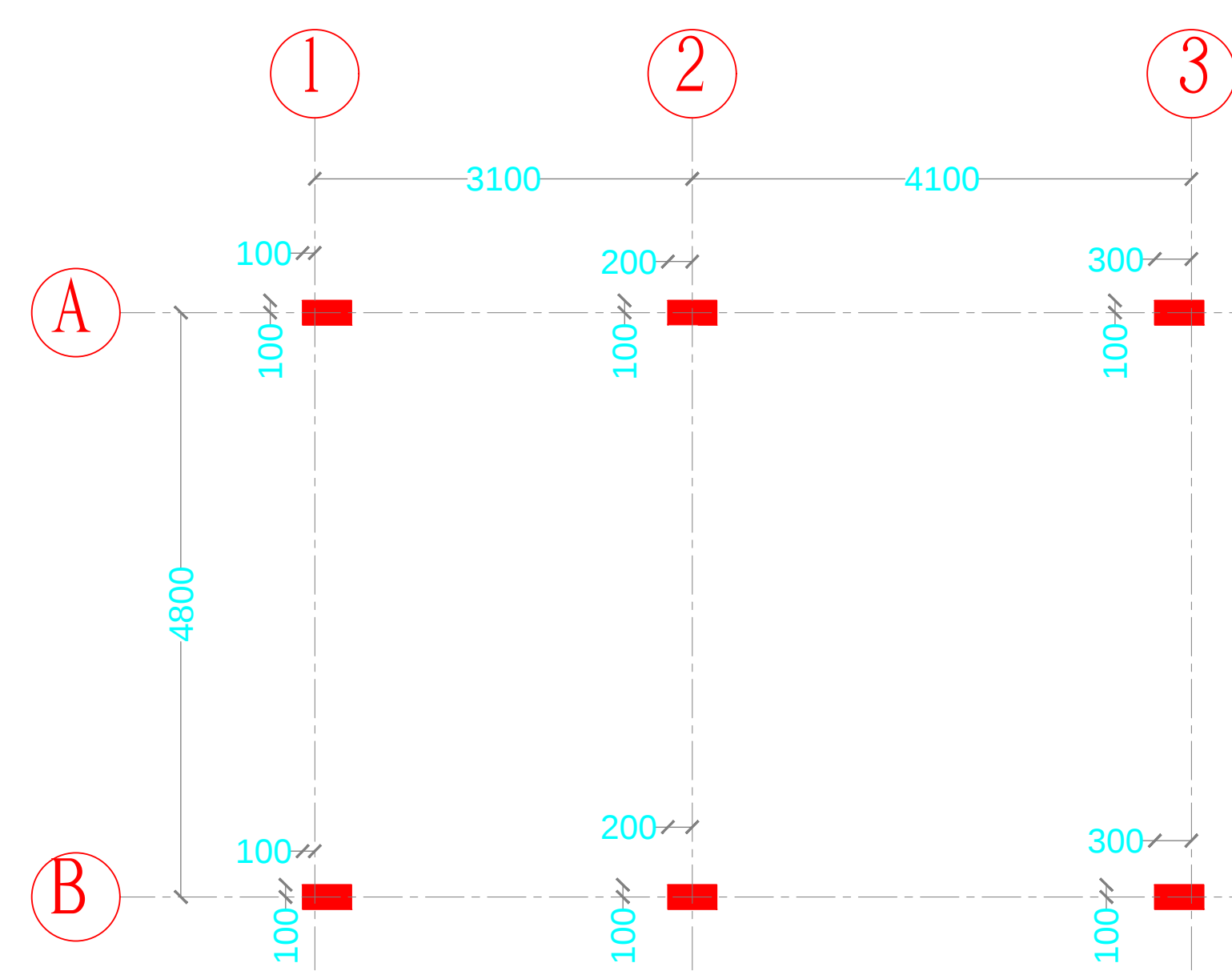
ITEM	CLASS	CUBE STRENGTH 28D
1-PLAIN CONCRETE	B200	230 kg/cm ²
2-OTHERS	B250	288 kg/cm ²
3-COLUMNS	B300	345 kg/cm ²

CONCRETE COVER

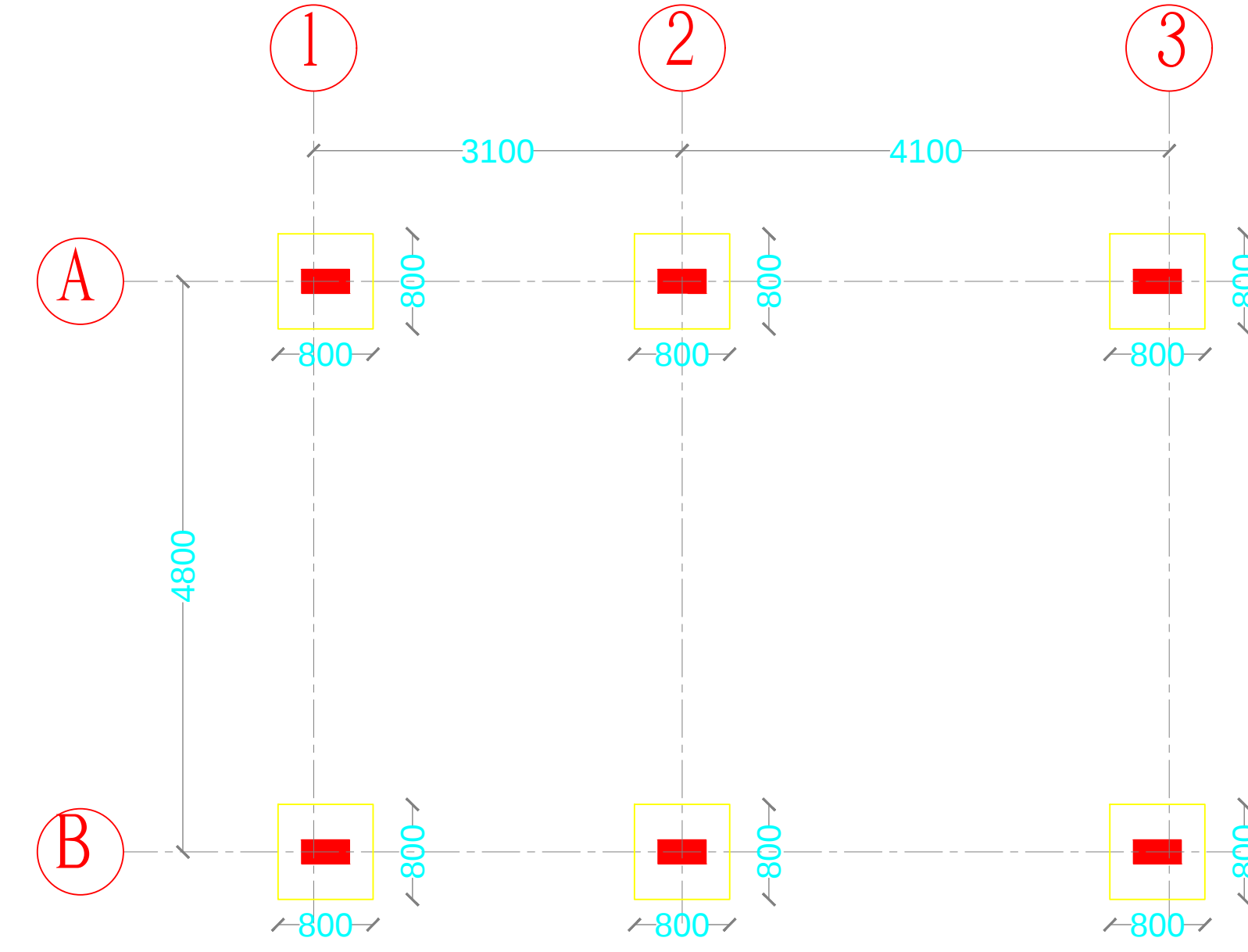
- 1- 70mm IN FOUNDATIONS
- 1- 40mm IN COLUMNS
- 2- 30mm SLABS

CONCRETE PROTECTION

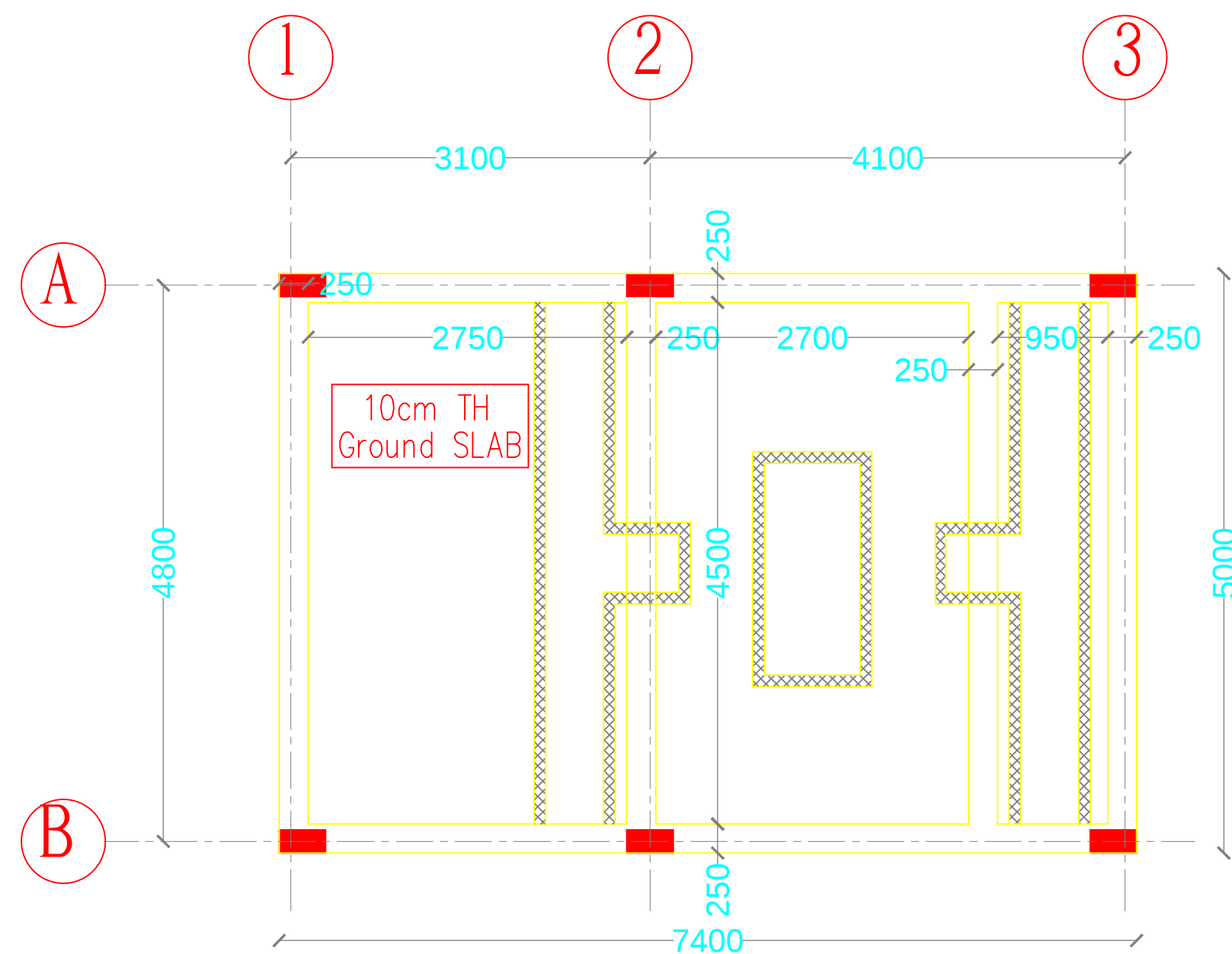
- 1-CONCRETE UP TO PLINTH LEVEL MUST BE COATED
WITH TWO COATS OF HOT BITUMEN.



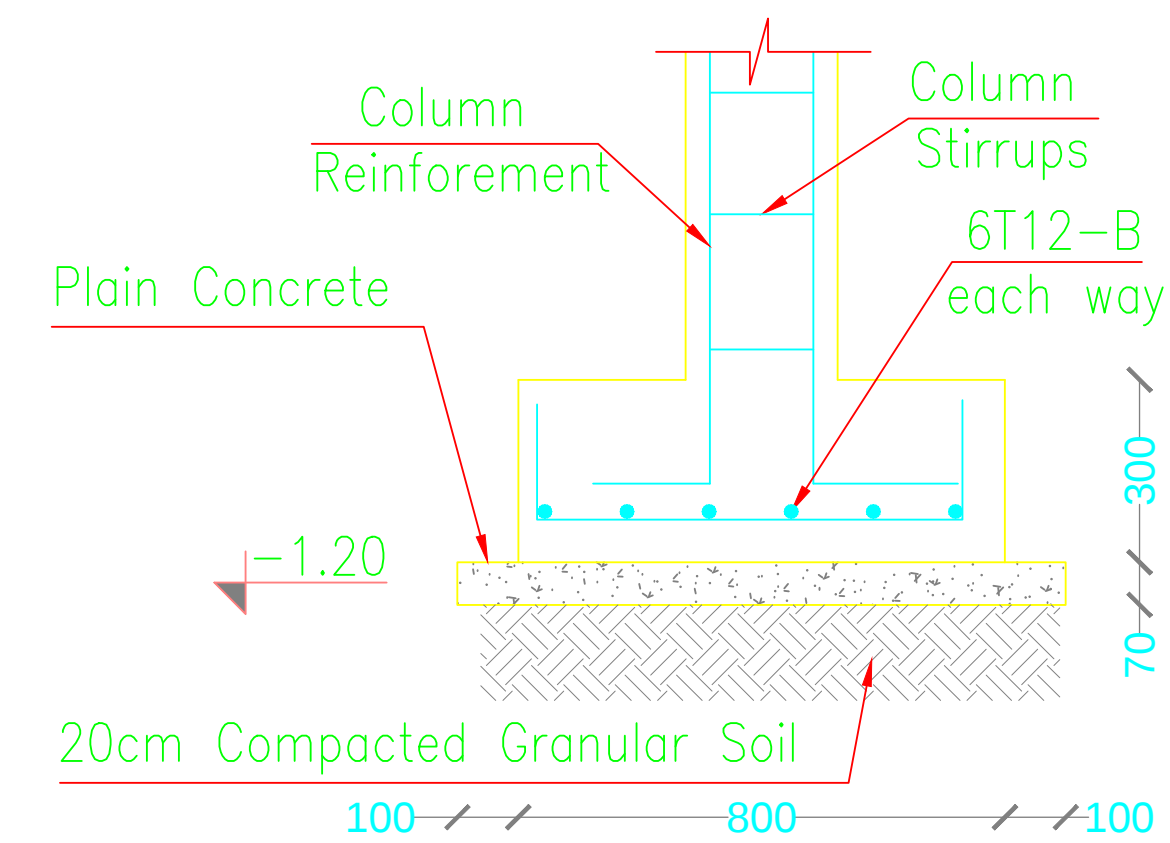
Columns Layout



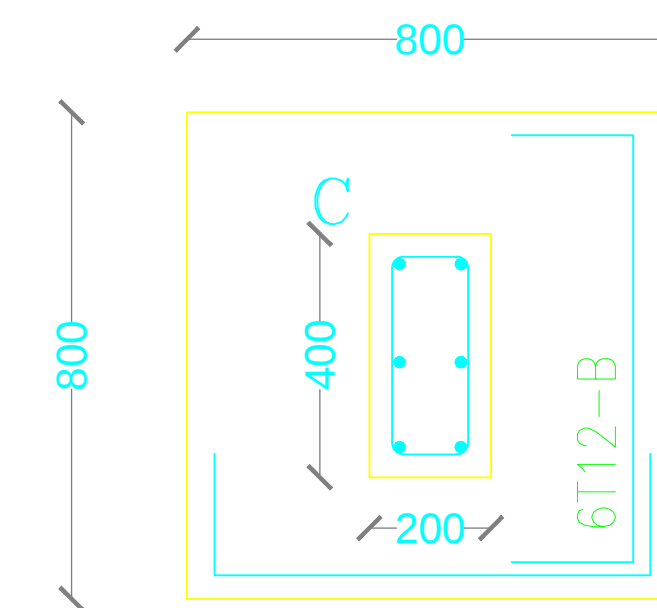
Foundation Layout



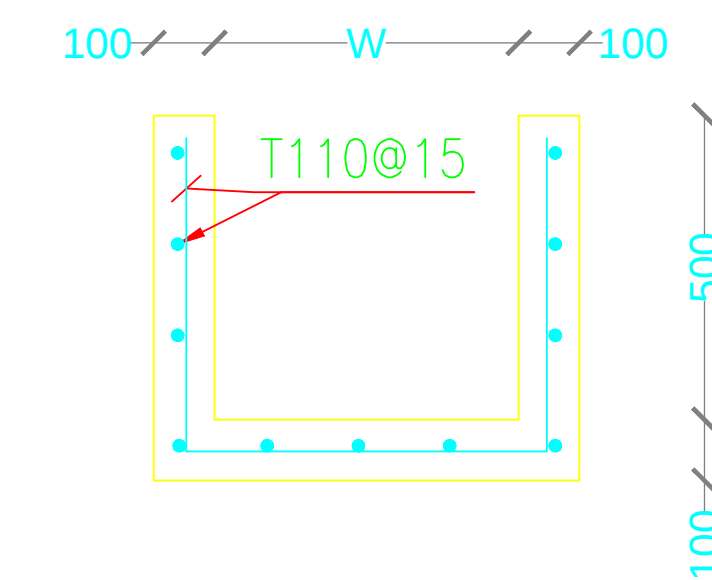
* Trenches layout is for indication only, the required layout to be submitted by the contractor



Section



Plan



Typical Trenches Details

1:25

Typical Footing Details

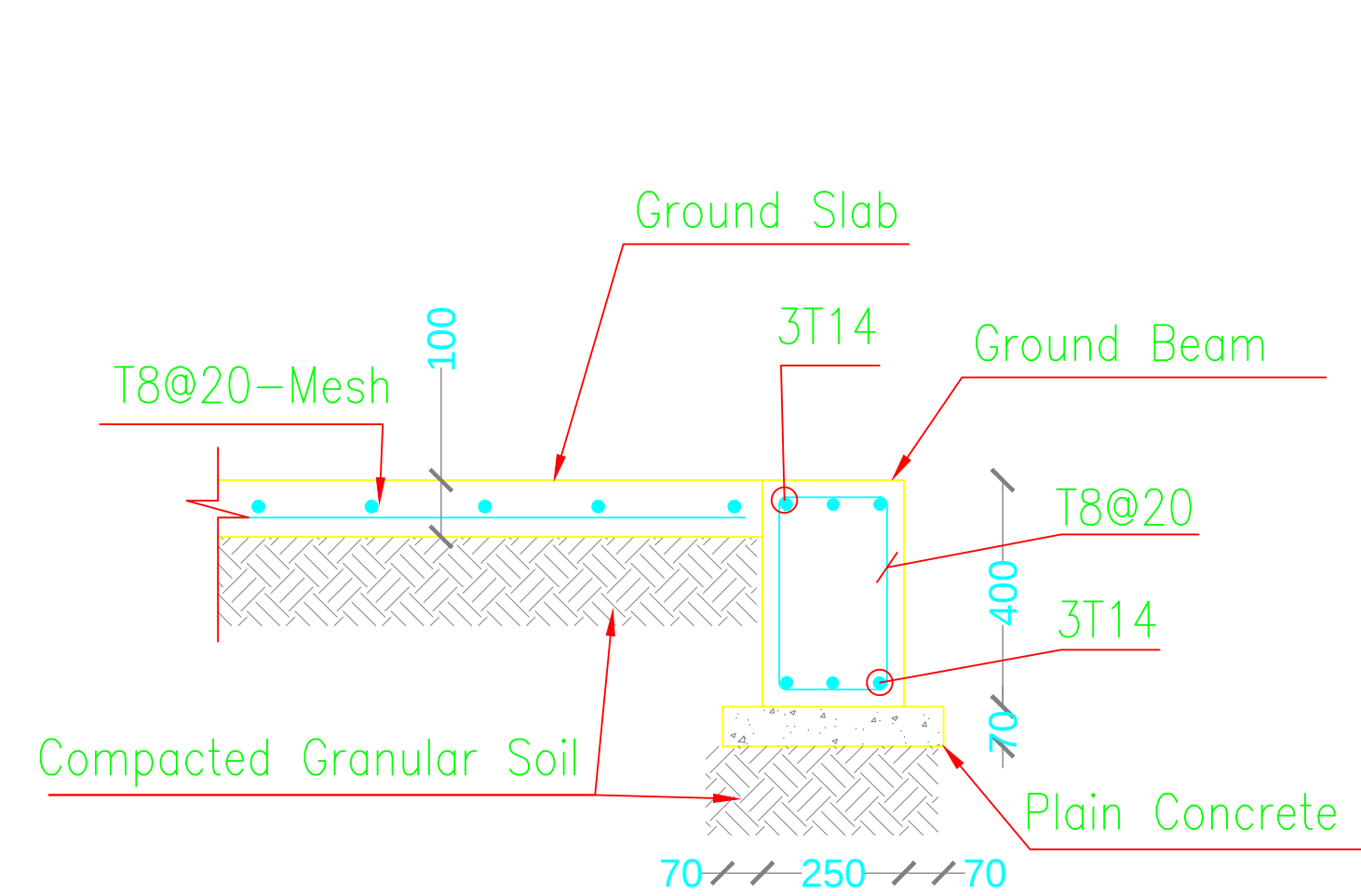
SCALE 1:25

Notes:

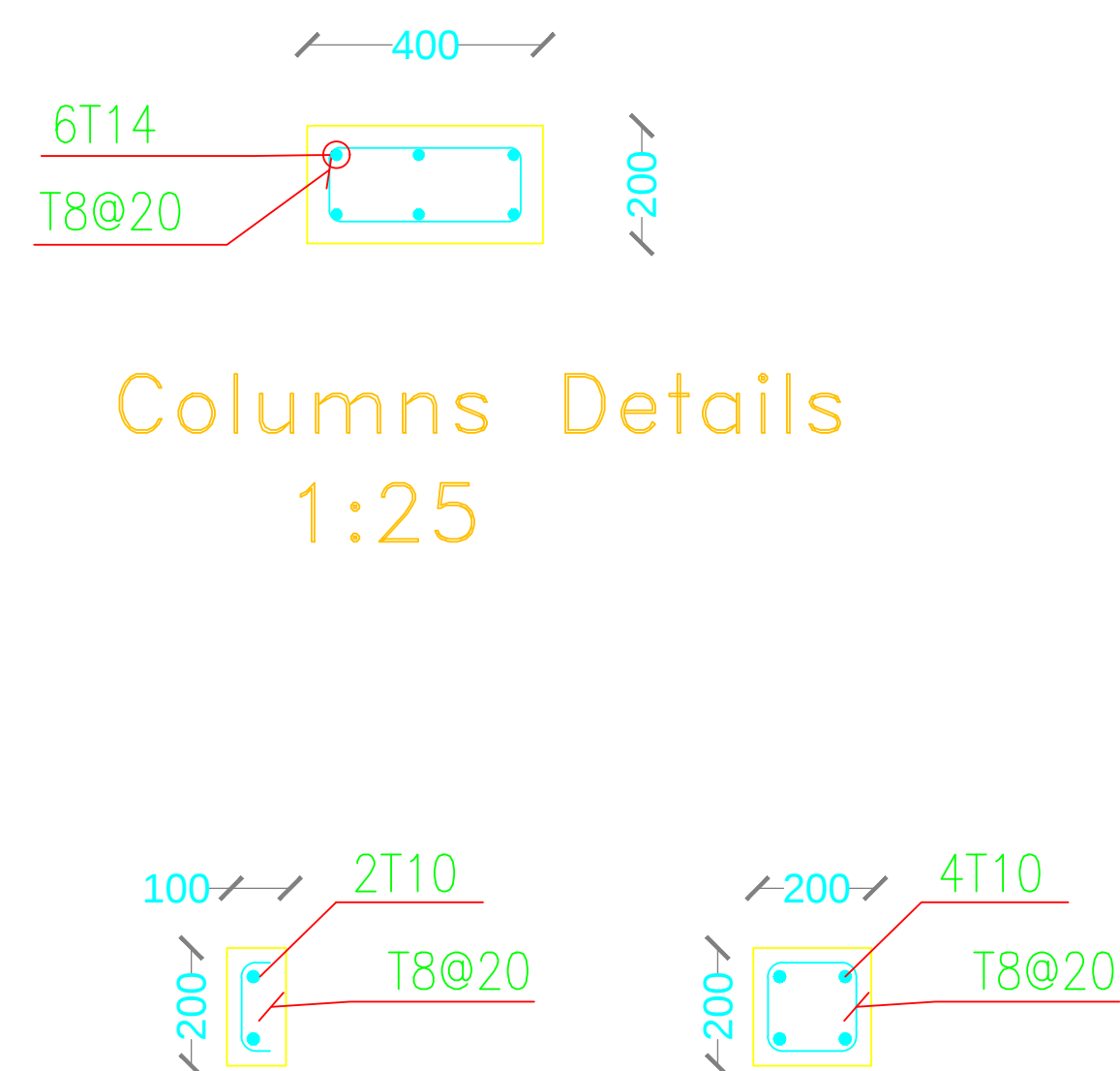
<u>Client</u> 			
			
<u>CONSULTANT</u>			
			

Engineering & Mangement Consulting Center

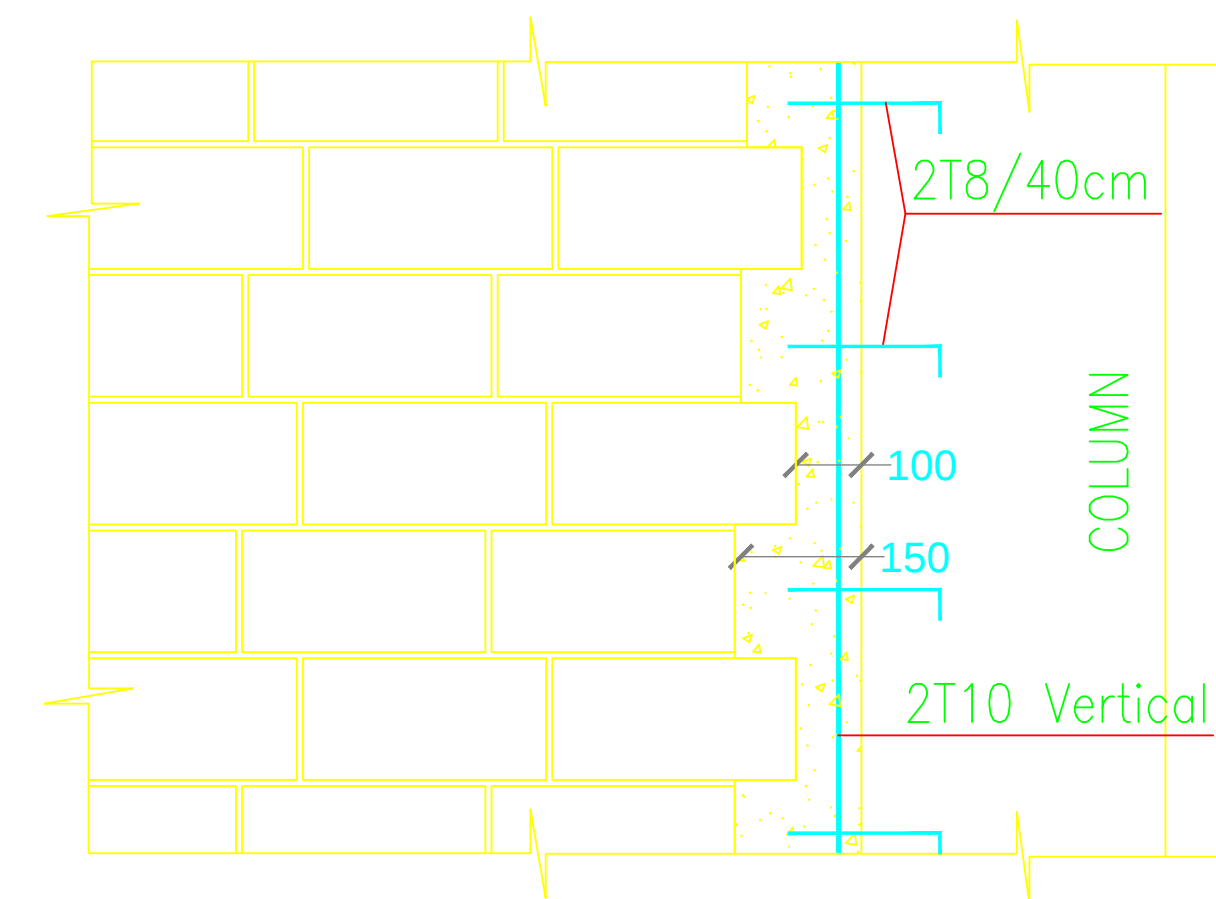
Project Name:	
Provision of Detailed Design and Technical Assistance Services for the Construction of Solar Energy System for Khan Younis Waste Water Treatment Plant (KY WWTP)	
RFP No.:	
PAL- 0000093741	
Drawing Title: Transformer room	
Structural Drawings	
Design	EMCC
Checked	EMCC
Drawing NO.	TR -03
Scale:	1 : 100
Date:	MAY. 2020



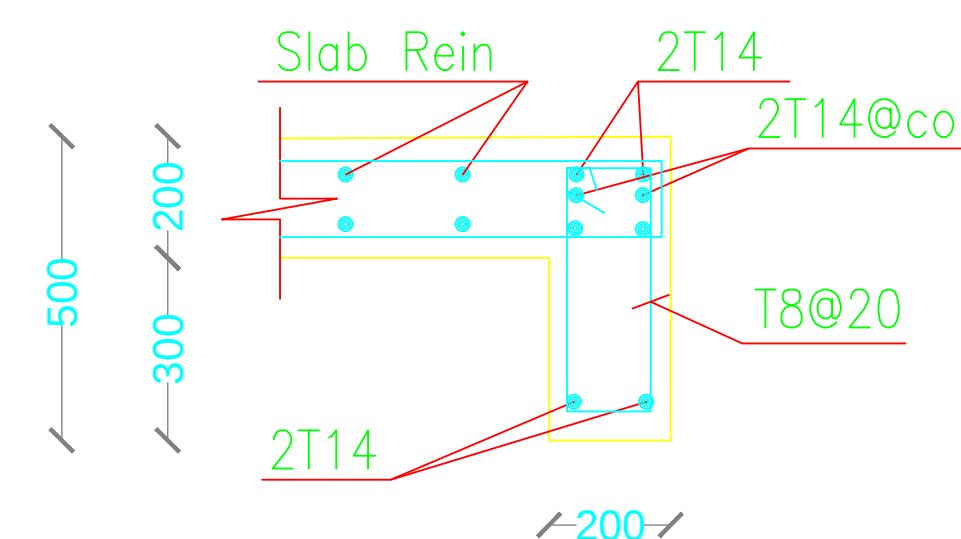
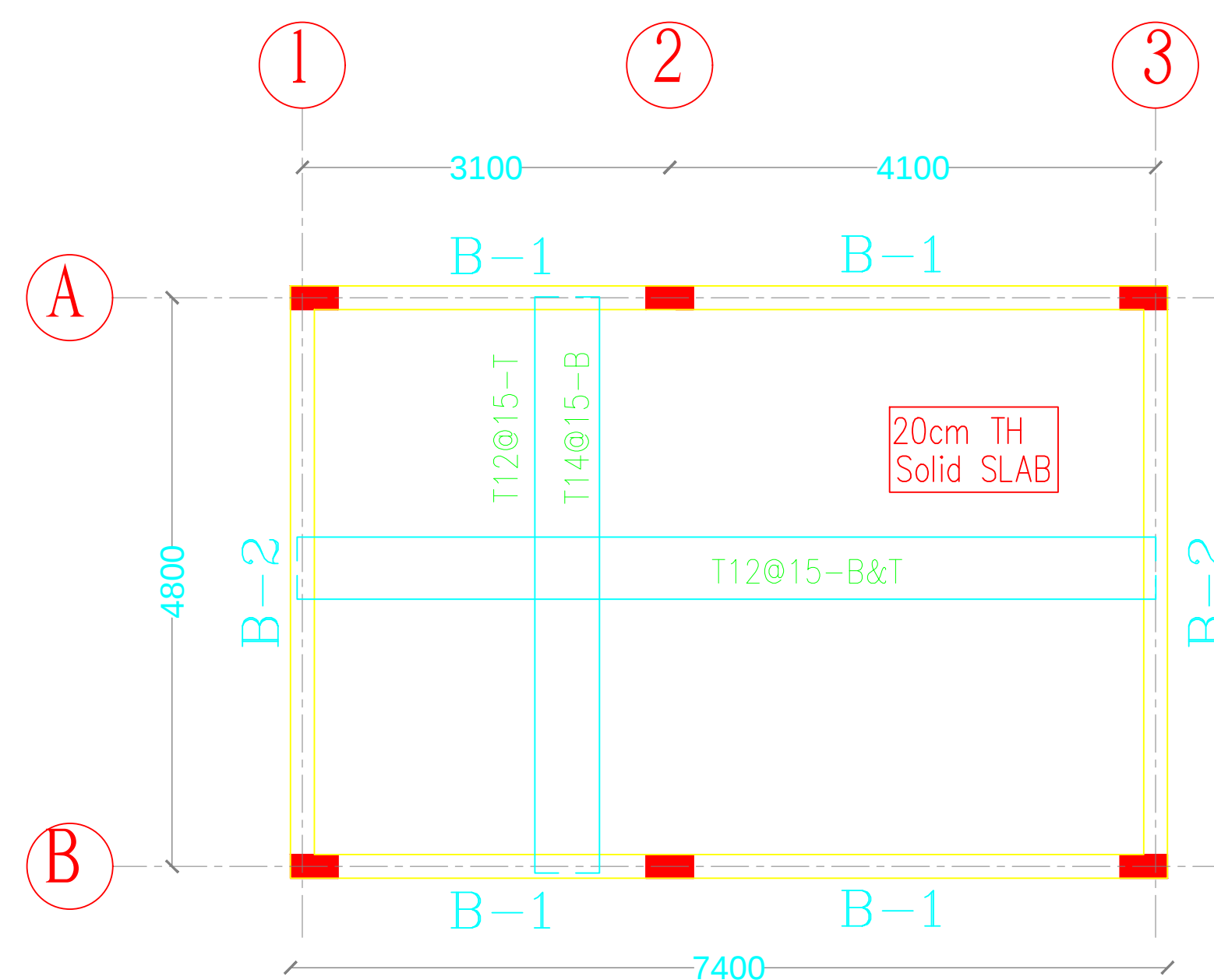
Typical G.B Details
SCALE 1:25



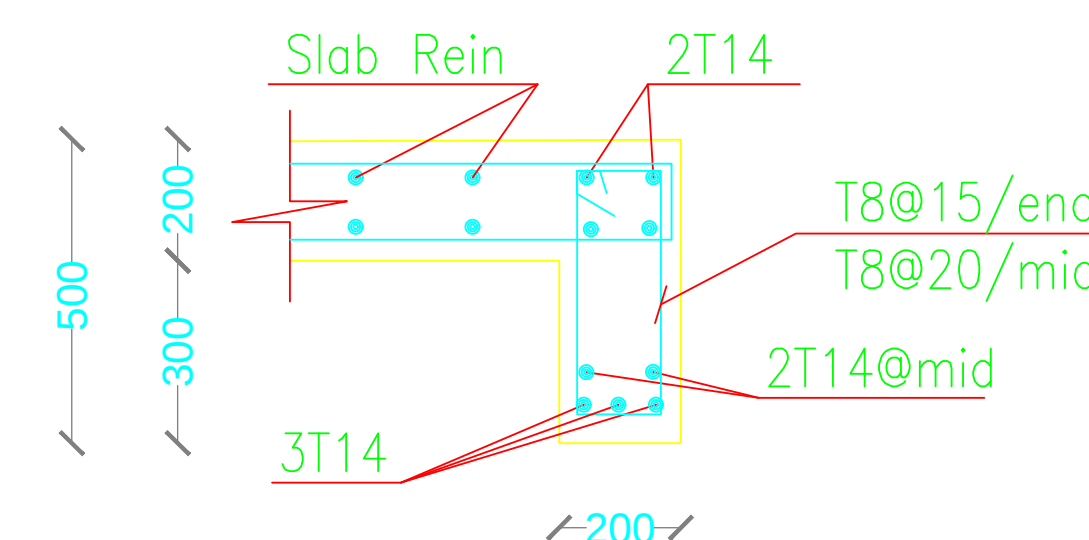
Columns Details
1:25



POST COLUMN DETAILS
1:25



Beam-1
1:25



Beam-2
1:25

Notes:

Donor

 Norwegian Ministry of Foreign Affairs

Norwegian Ministry of Foreign Affairs

Client

 UNDP

CONSULTANT

 EMCC

Engineering & Mangement Consulting Center

Project Name:

Provision of Detailed Design and Technical Assistance Services for the Construction of Solar Energy System for Khan Younis Waste Water Treatment Plant (KY WWTP)

RFP No.:

PAL- 0000093741

Drawing Title:

Transformer room
Structural Drawings

Design

EMCC

Checked

EMCC

Drawing NO.

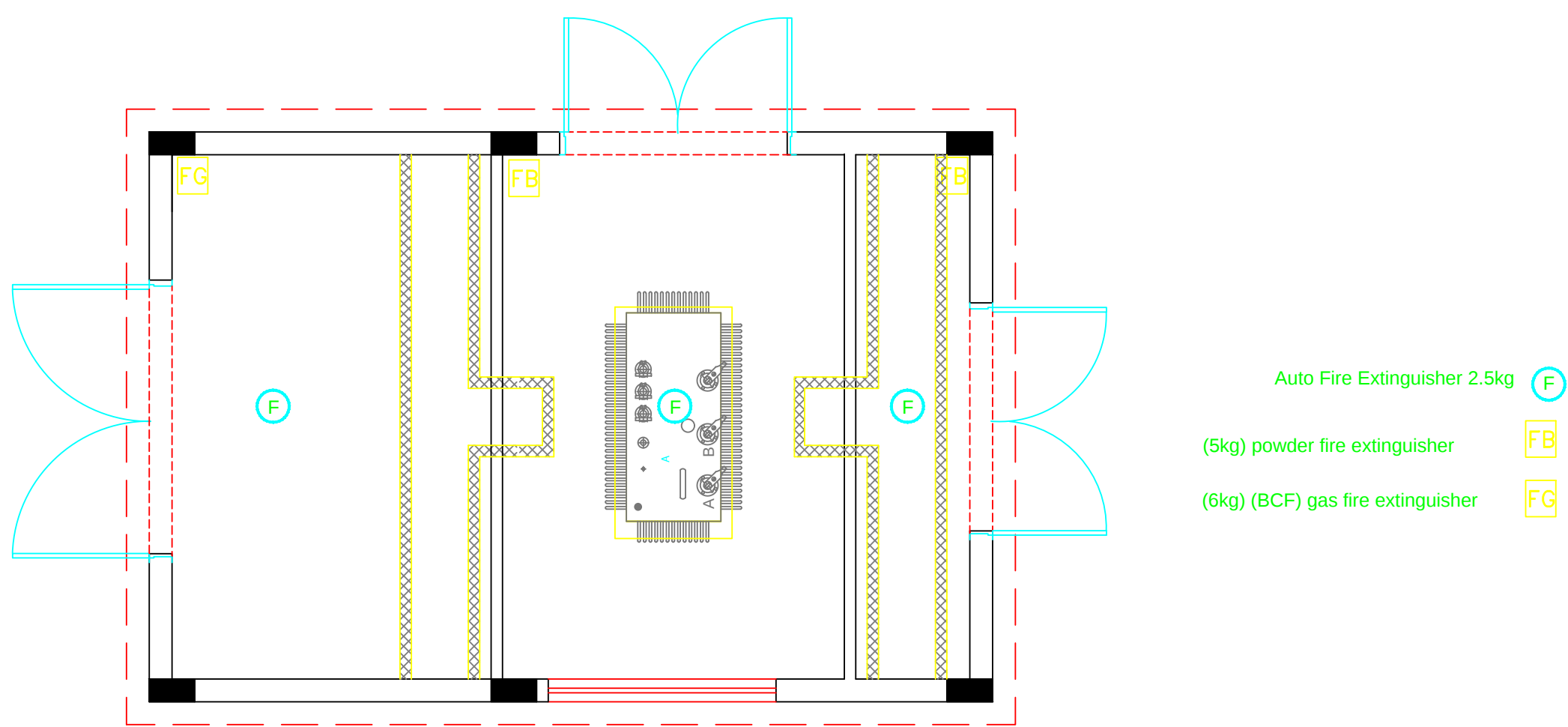
TR -04

Scale:

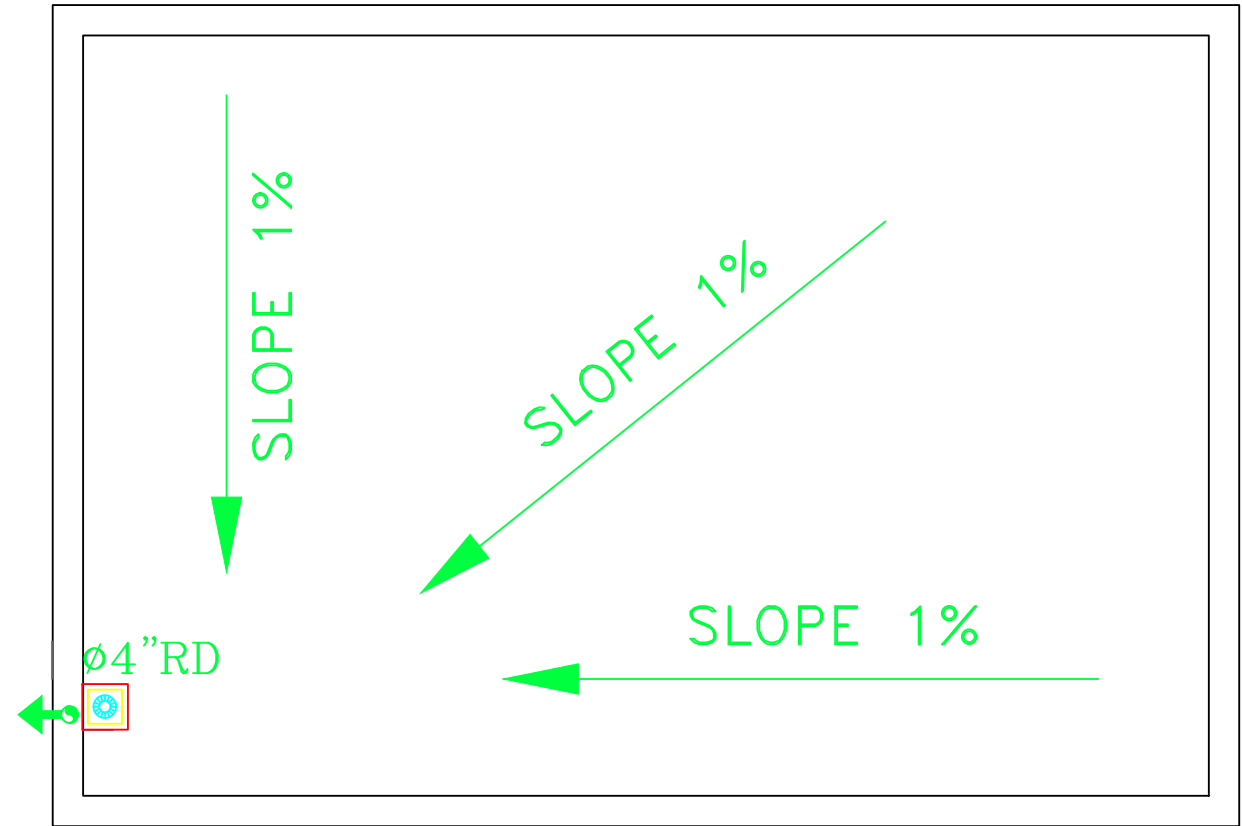
1 : 100

Date:

MAY. 2020



Fire Plan



Rainwater Drainage Plan

Notes:

Donor



Norwegian Ministry of Foreign Affairs

Norwegian Ministry of Foreign Affairs

Client



CONSULTANT



Engineering & Mangement Consulting Center

Project Name:
Provision of Detailed Design and Technical Assistance Services for the Construction of Solar Energy System for Khan Younis Waste Water Treatment Plant (KY WWTP)

RFP No. :
PAL- 0000093741

Drawing Title: Transformer room
Fire & Rainwater Drainage Plan

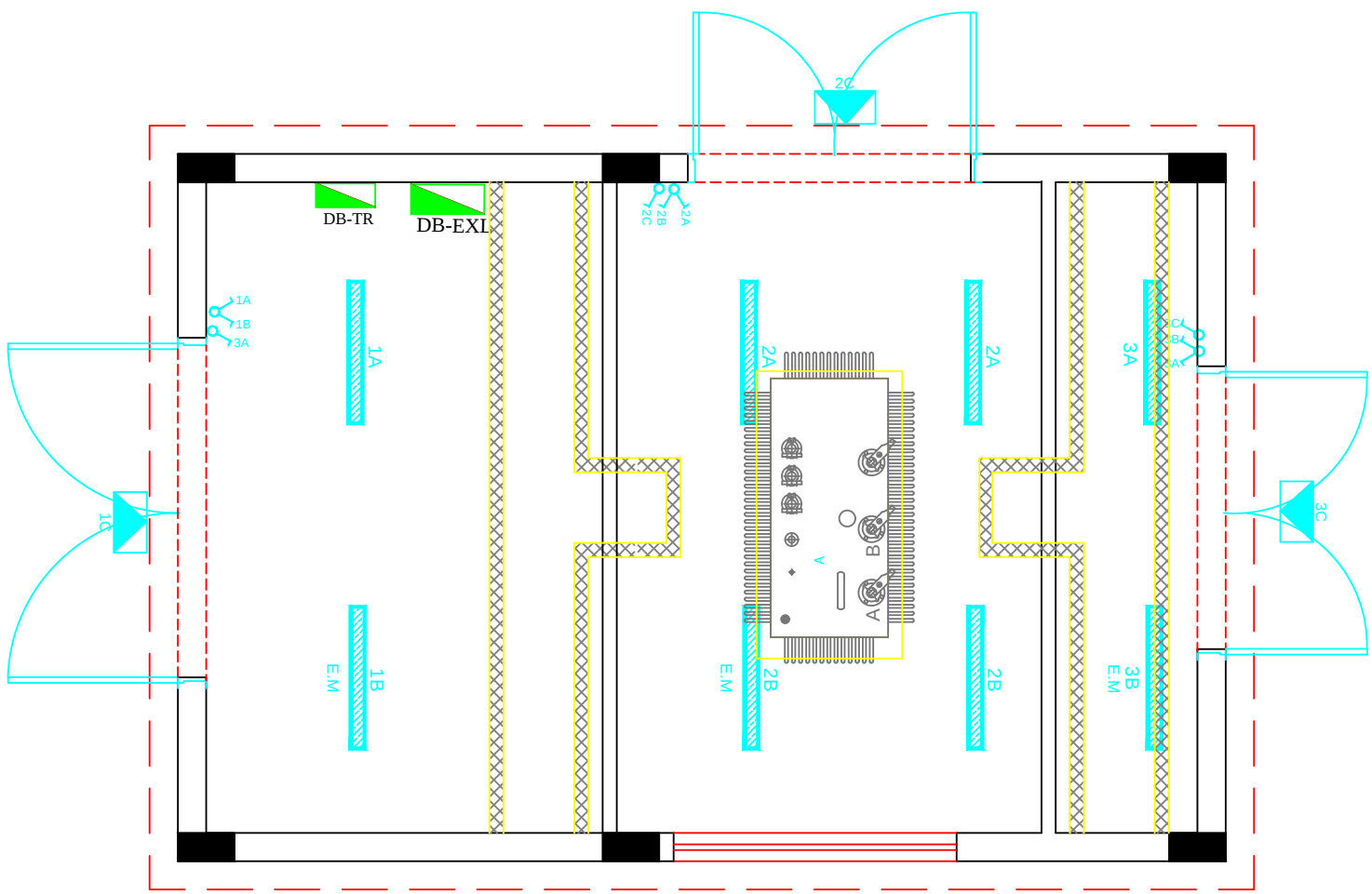
Design	EMCC
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Checked	EMCC
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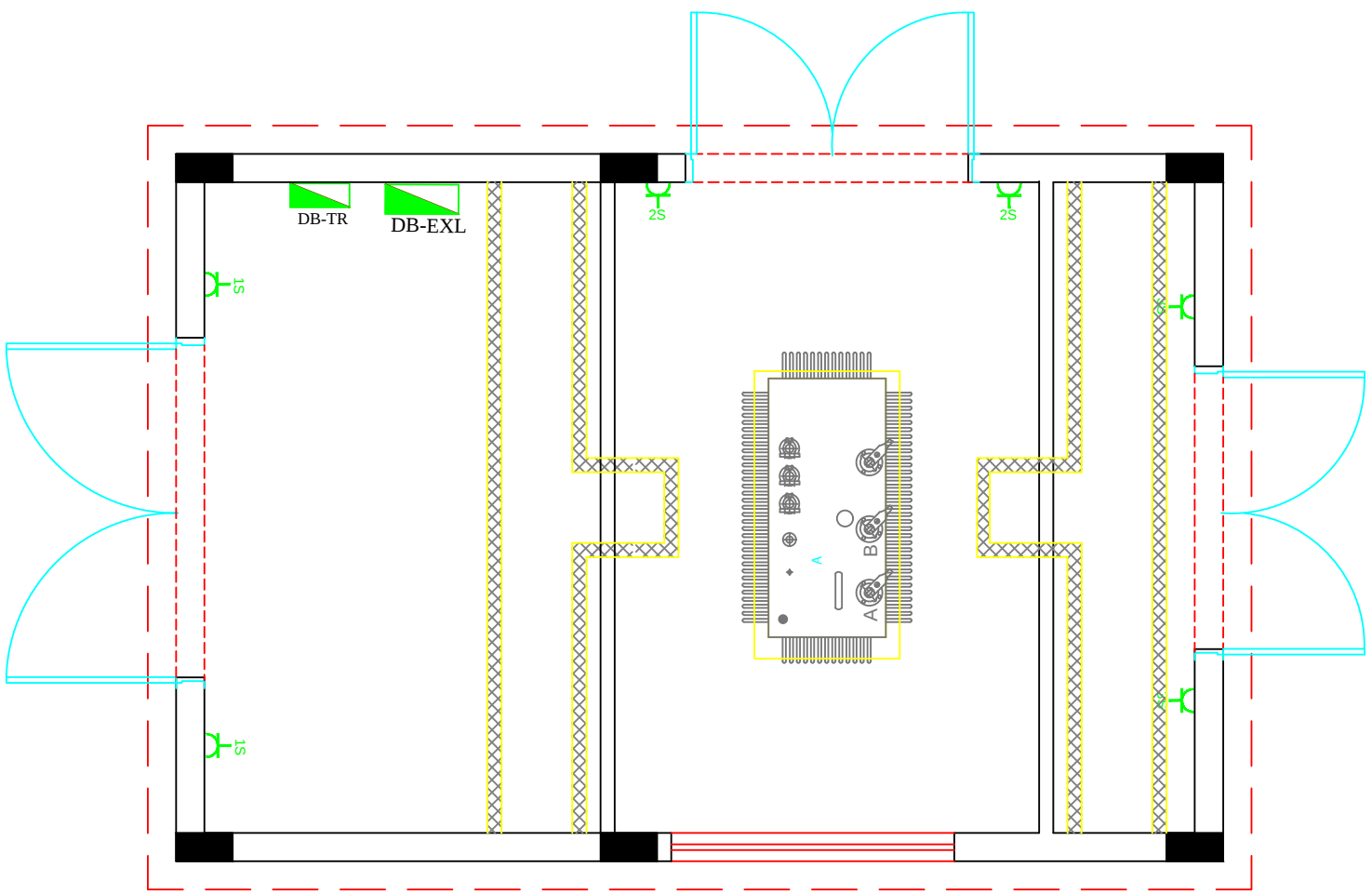
Drawing NO.	TR -05
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Scale:	1 : 100
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Date:	MAY. 2020
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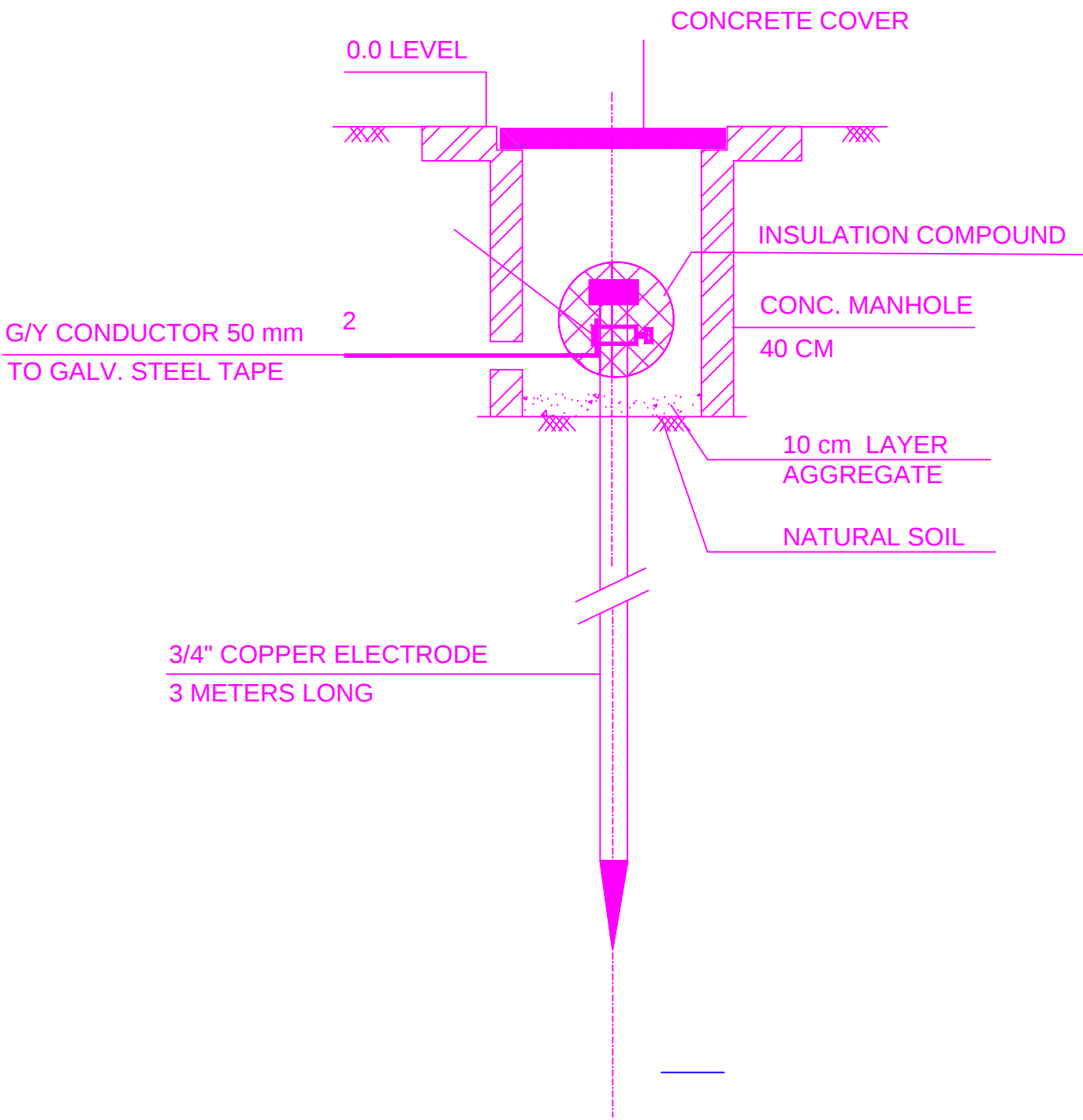
LIGHTING PLAN FOR TRANSFORMER ROOM



POWER PLAN FOR TRANSFORMER ROOM

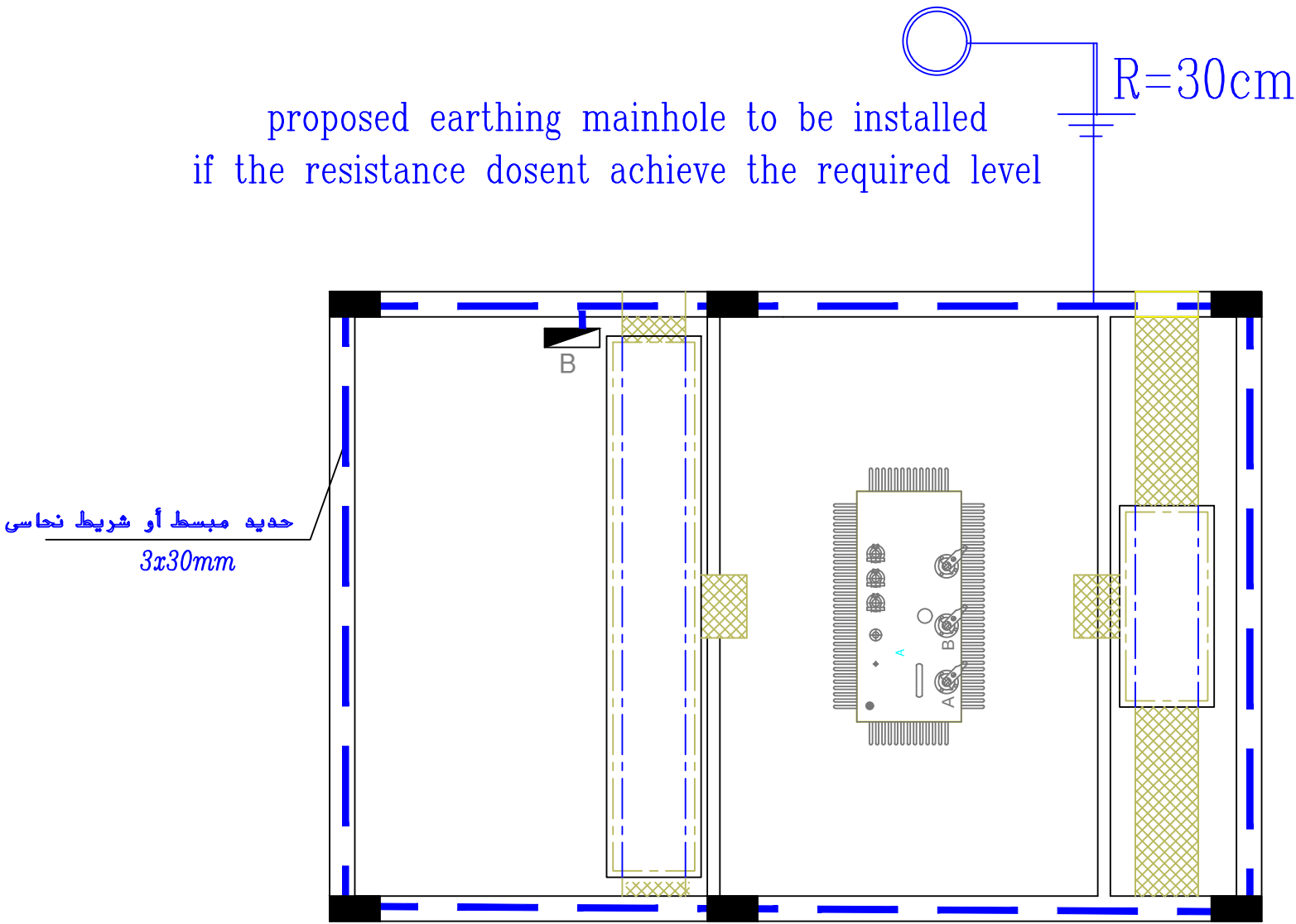
SYMBOL	DESCRIPTION
	18W SURFACE MOUNTED LED LIGHTING FIXTURE WITH OUT REFLECTOR IP40.
	10W INCANDESCENT SURFACE MOUNTED LED LIGHT WATER PROOF.
	50W EXTERNAL WALL MOUNTED LED LIGHT IP65.
	6" WALL OR WINDOW MOUNTED EXHAUST FAN WITH MOVEABLE LOUVERS.
	ONE GANG, ONE WAY LIGHTING SWITCH-10A.
	TWO GANG, ONE WAY LIGHTING SWITCH-10A.
	16A SINGLE PHASE, 3-PIN SOCKET OUTLET.
	DITTO BUT DUPLEX SOCKET OUTLET.
	DITTO BUT WATER PROOF IP65.
	T.V SOCKET OUTLET.
	TELEPHONE SOCKET OUTLET.
	SUB DISTRIBUTION BOARD HOT G.STEEL THICKENS 2 mm SIZE 40X60CM
	Auto Fire Extinguisher 2.5kg

Electrical Symbols

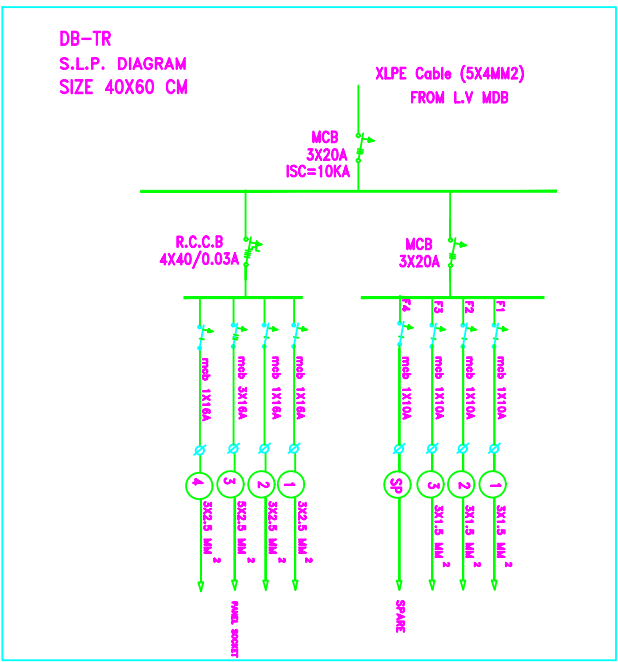
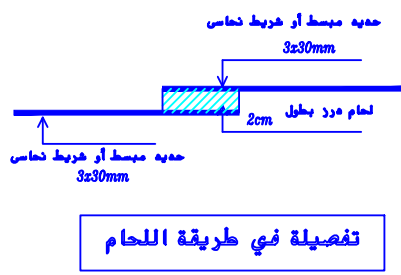


EARTGING MANHOLE
DETAILS II (N.T.S)

ملاحظة
من ٥ اوم
مقاومة الارضى اقل
 $R < 5 \Omega$

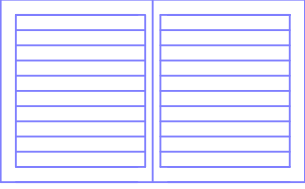


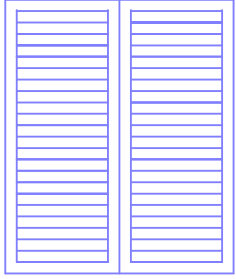
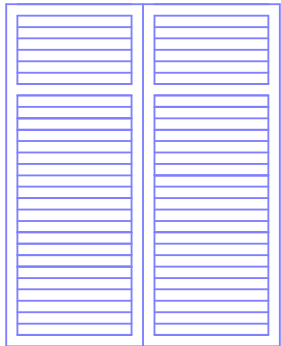
مخطط التأريض
مقياس رسم

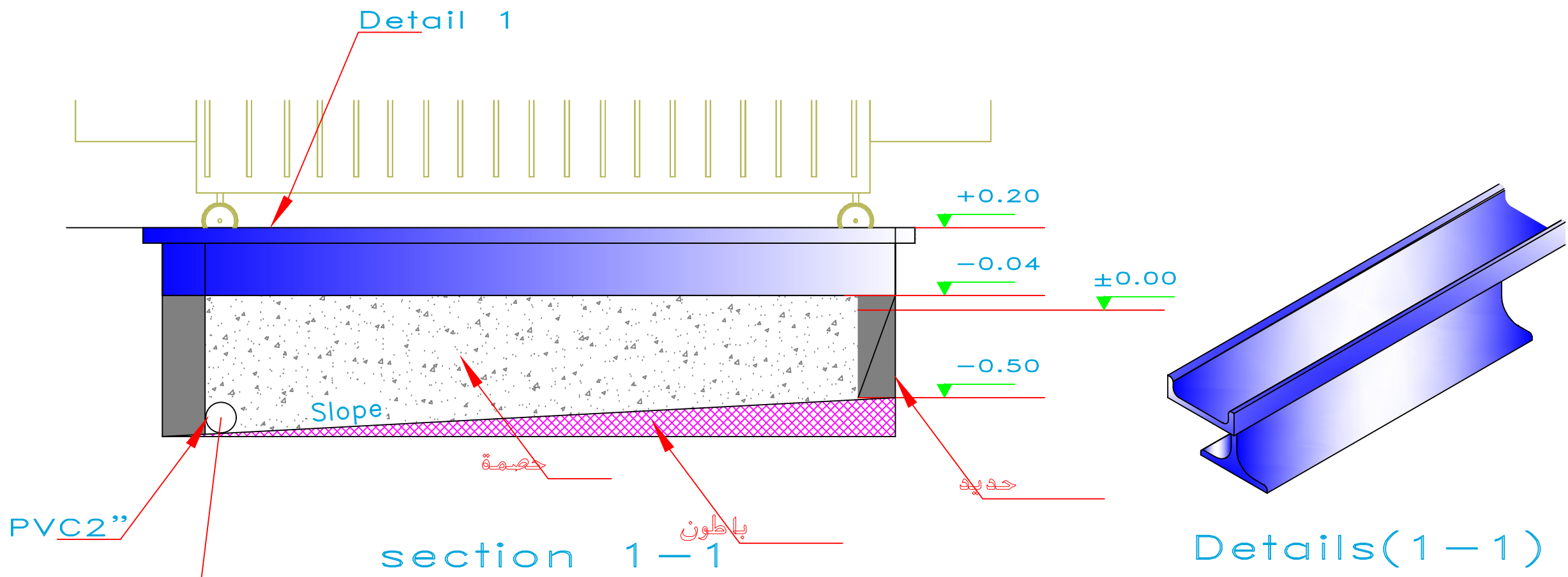


Notes

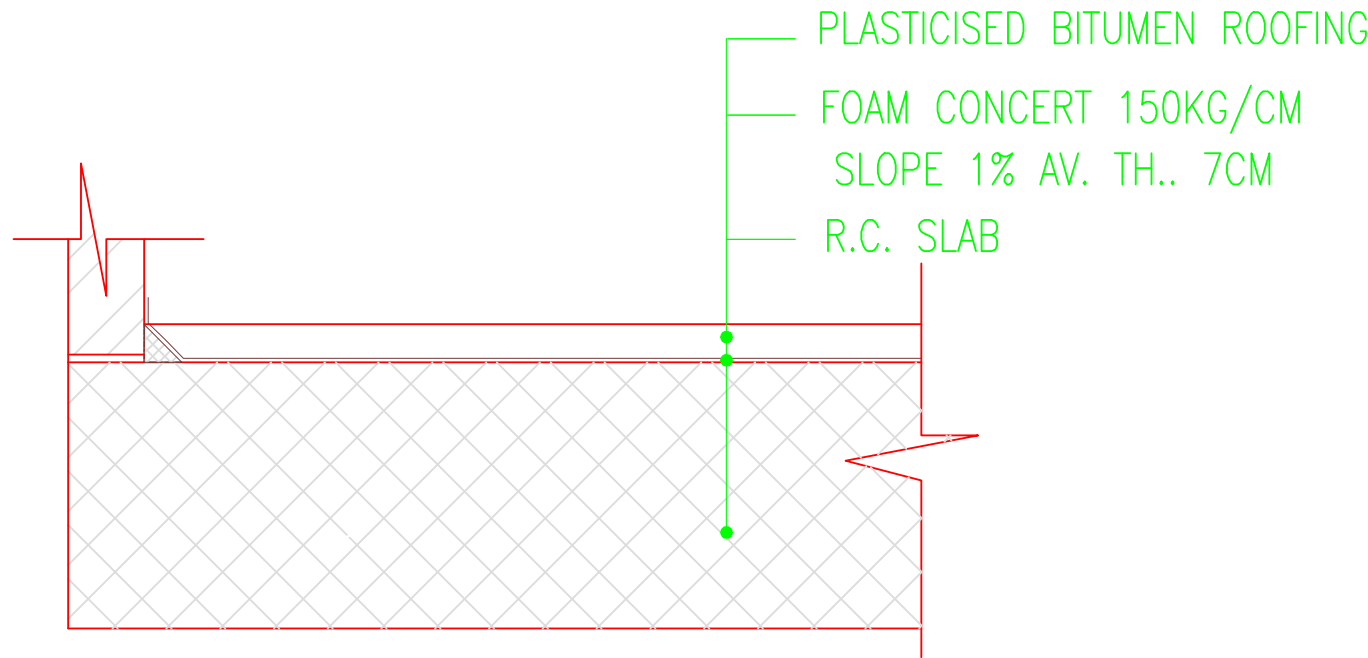
- Hardware locked type VERO (SWITCH) or equivalent , accessories, fittings, ironmongery , Stainless steel hinges , heavy handles (Doganlar or equivalent) , bolts and
- all necessary parts needed to complete the works.
- All Steel paints are Hummer type

WINDOWS SCHEDULE					
TYPE	HEIGHT/M	WIDTH/M	QUANTITY	Describing	Elevation
SW 01	1000	2000	1	Steel Window	

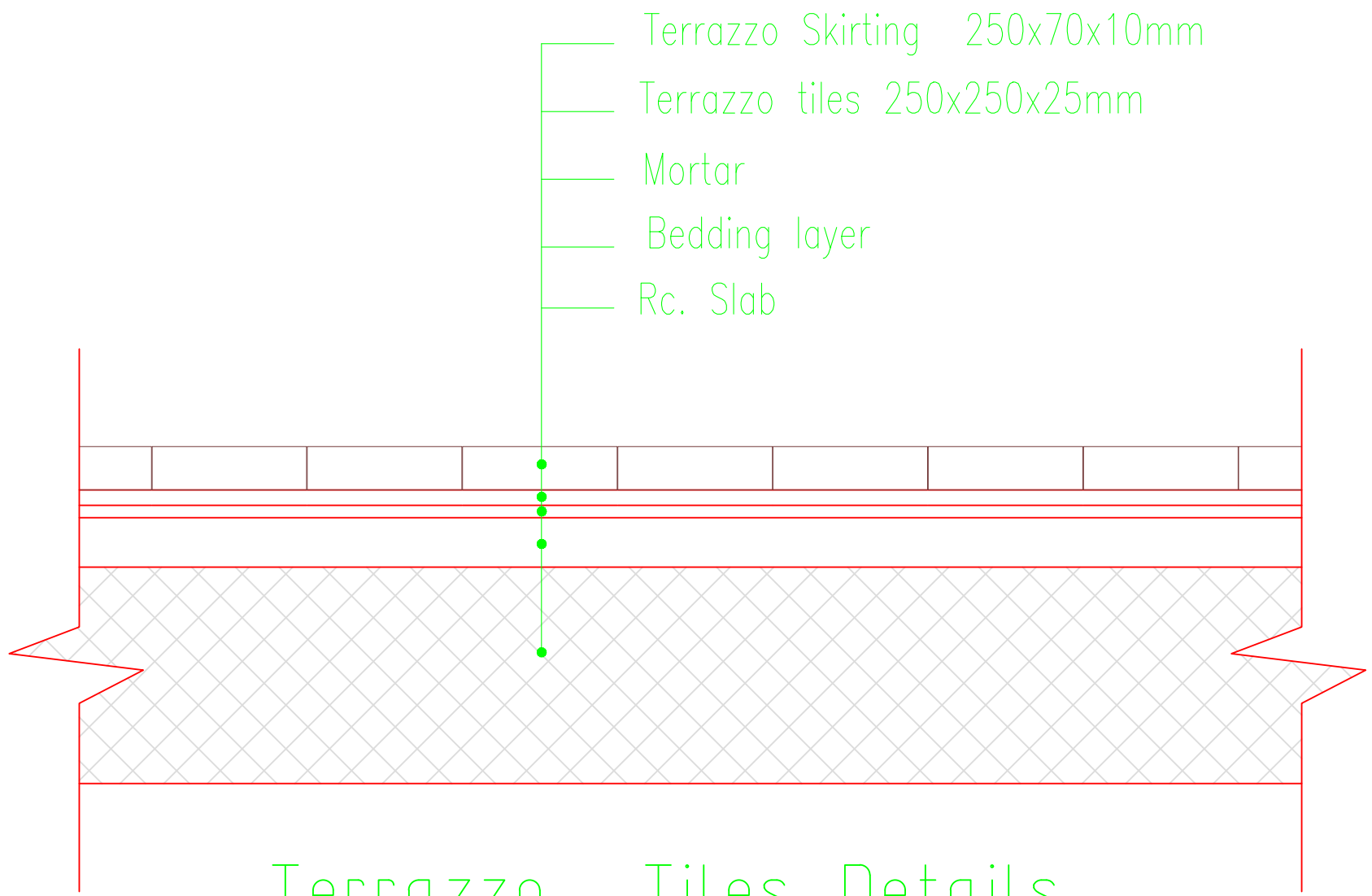
DOORS SCHEDULE					
TYPE	HEIGHT/CM	WIDTH/CM	QUANTITY	Describing	Elevation
SD 01	2400	2000	1	Steel Door	
SD 02	3000	2400	1	Steel Door	



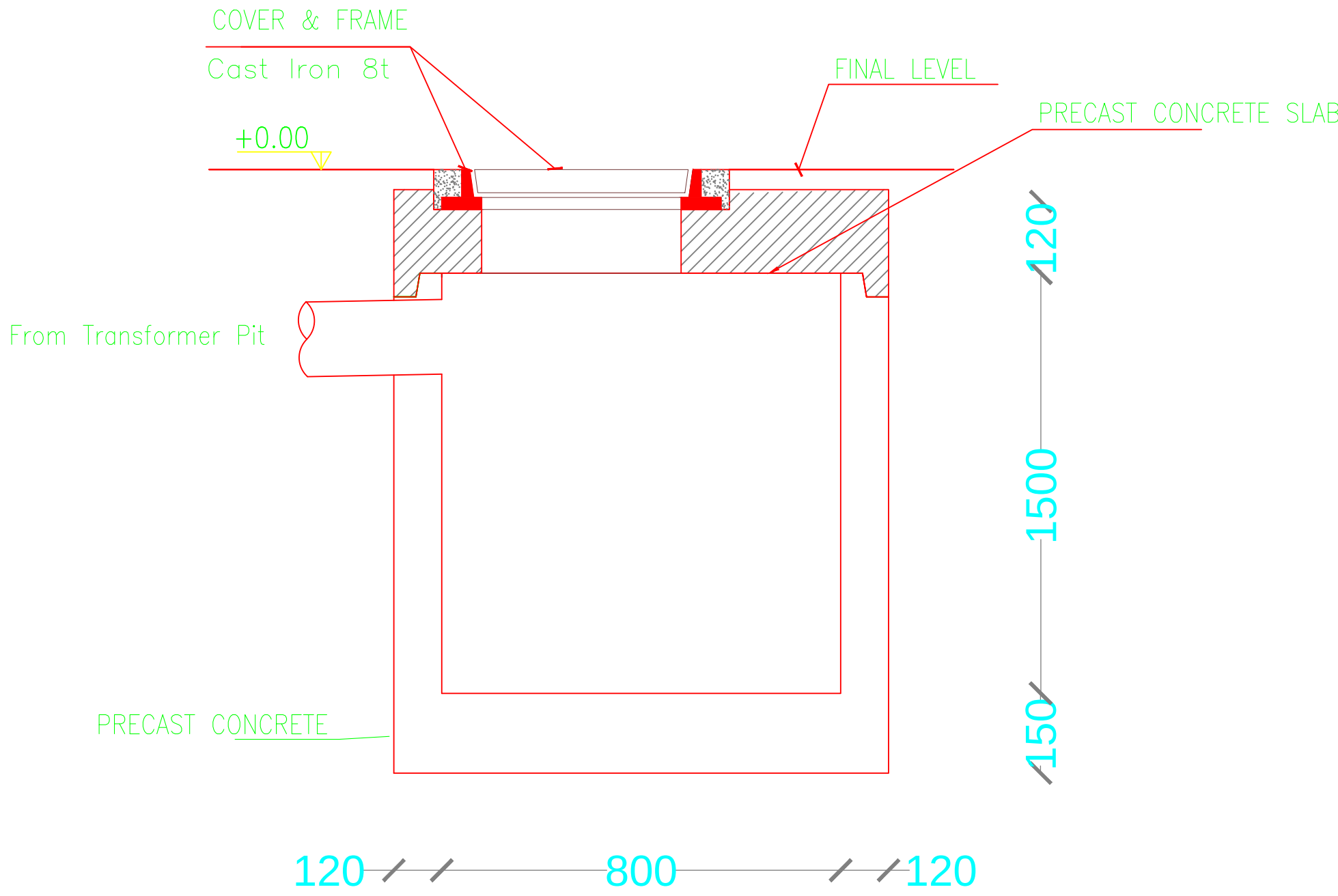
Work includes Supply and install precast concrete sewerage manholes B300 of 80cm internal diameter with cast iron cover of 8 tonne bearing capacity. The depth is up to and including 1.0m.



Typical Roof Details
N.T.S



Terrazzo Tiles Details
N.T.S



Oil Manhole
NTS

Notes:

Donor



Norwegian Ministry of Foreign Affairs

Norwegian Ministry of Foreign Affairs

Client



UNDP

CONSULTANT



Engineering & Mangement Consulting Center

Project Name:
Provision of Detailed Design and Technical Assistance Services for the Construction of Solar Energy System for Khan Younis Waste Water Treatment Plant (KY WWTP)

RFP No.:
PAL- 0000093741

Drawing Title:
Transformer room
Details -1

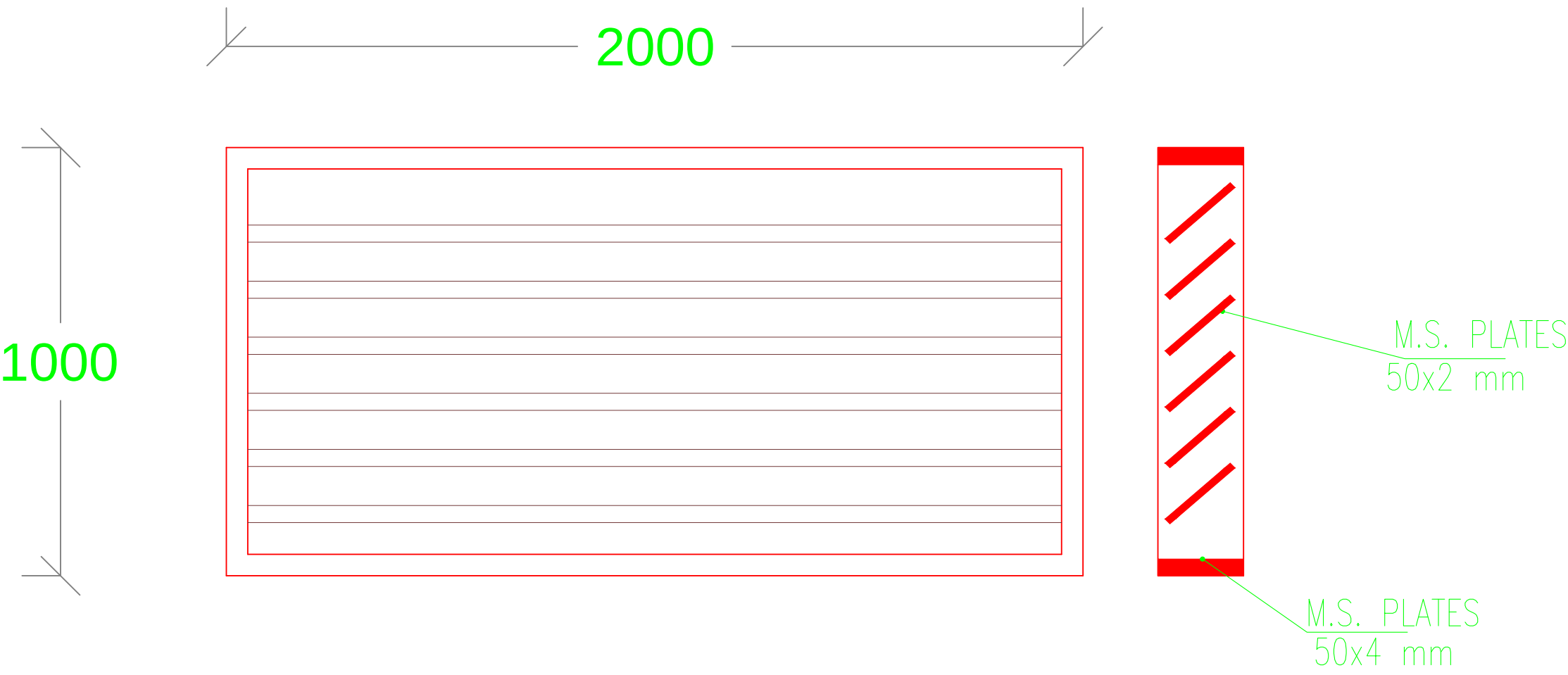
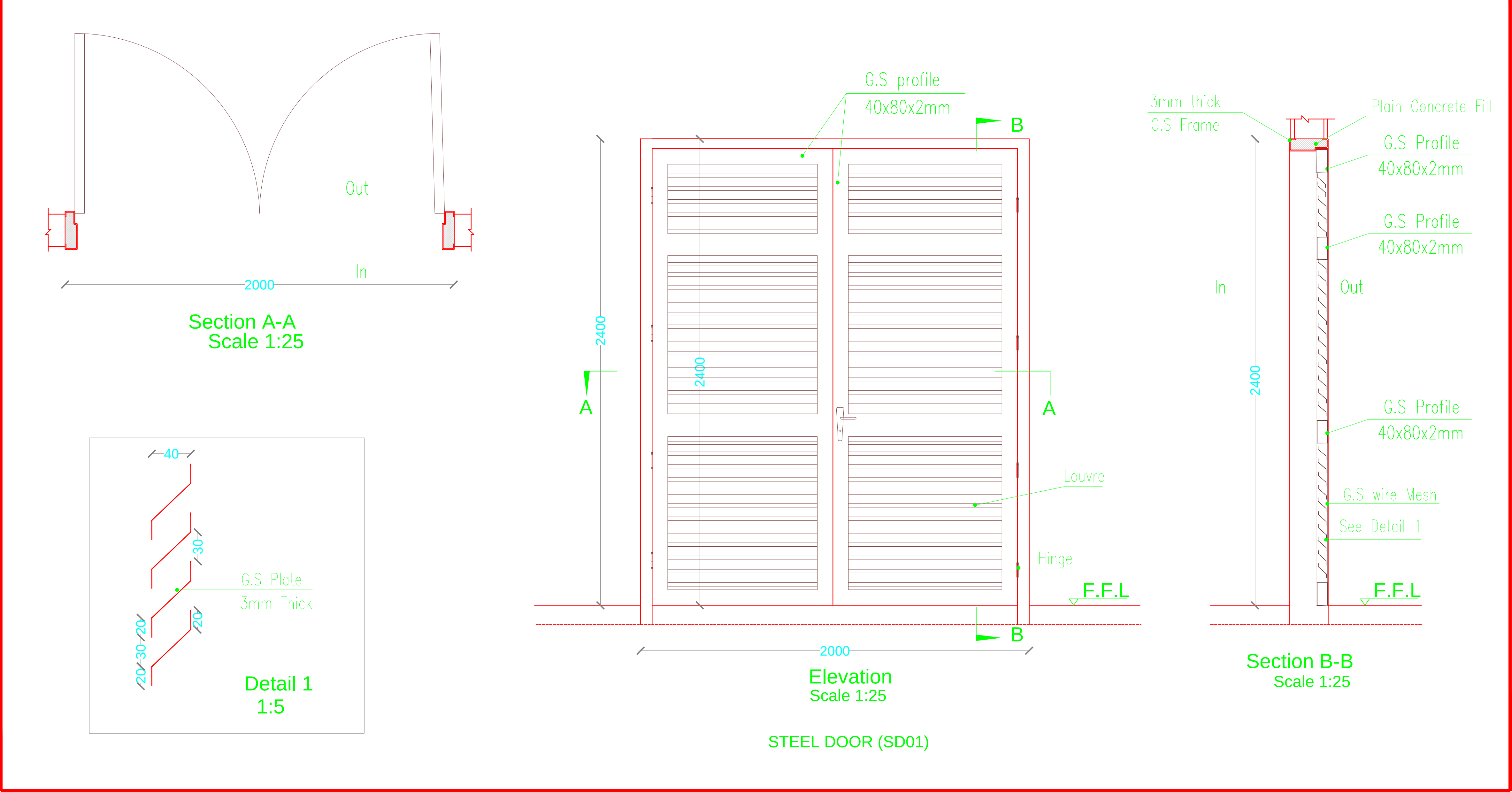
Design
EMCC

Checked
EMCC

Drawing NO.
TR -07

Scale:
AS DRAWINGS

Date:
MAY. 2020



Windows Grill Details
(SW01)
Scale 1:25

Notes:

Donor

 Norwegian Ministry of Foreign Affairs

Norwegian Ministry of Foreign Affairs

Client

 UNDP

CONSULTANT

 EMCC

Engineering & Mangement Consulting Center

Project Name:
Provision of Detailed Design and Technical Assistance Services for the Construction of Solar Energy System for Khan Younis Waste Water Treatment Plant (KY WWTP)

RFP No.:
PAL- 0000093741

Drawing Title: Transformer room
DETAILS -2

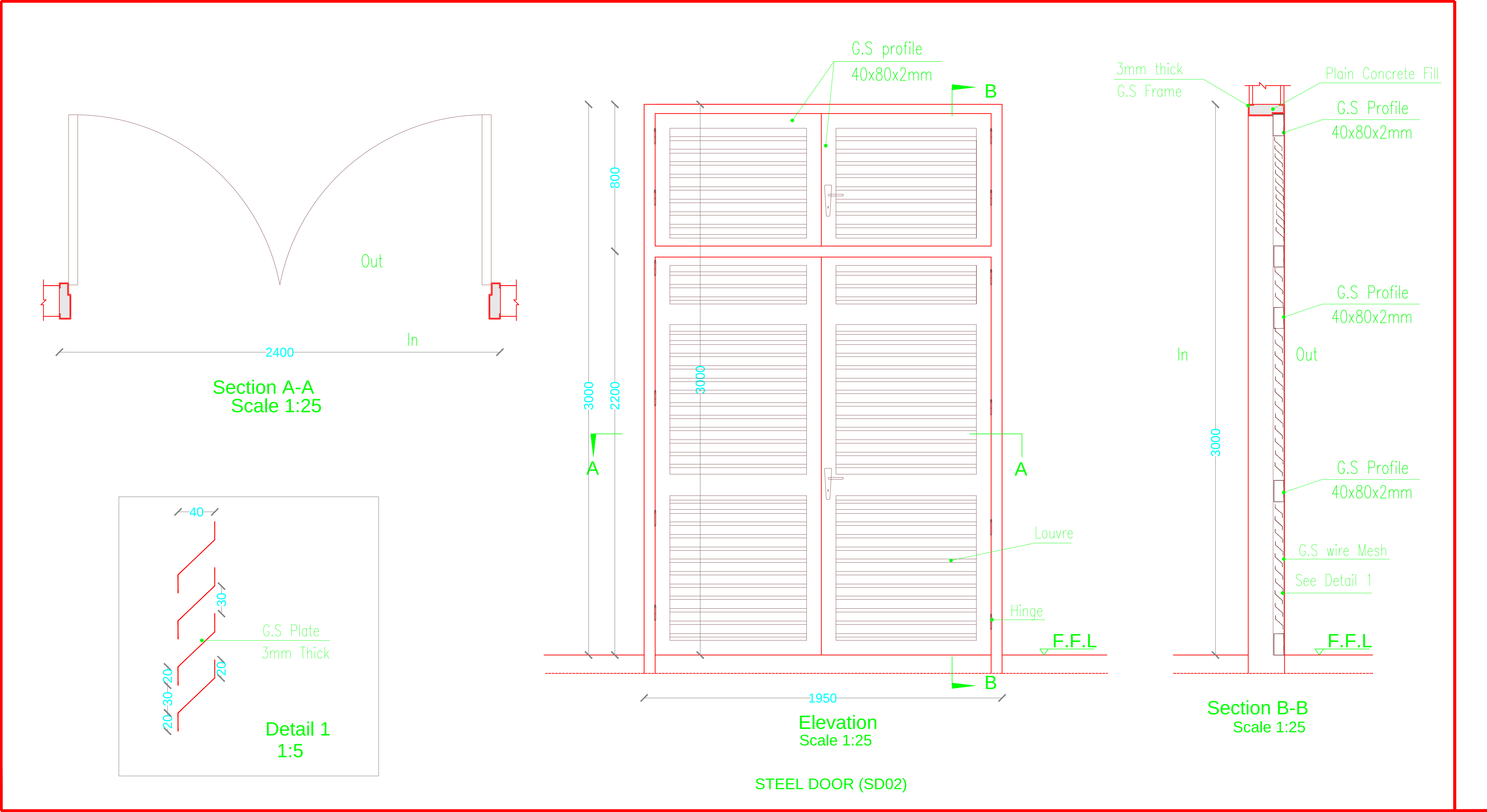
Design EMCC

Checked EMCC

Drawing NO. TR -08

Scale: AS DRAWINGS

Date: MAY. 2020



Notes:

Donor

 Norwegian Ministry of Foreign Affairs

Norwegian Ministry of Foreign Affairs

Client

 UNDP

CONSULTANT

 EMCC

Engineering & Mangement Consulting Center

Project Name:
Provision of Detailed Design and Technical Assistance Services for the Construction of Solar Energy System for Khan Younis Waste Water Treatment Plant (KY WWTP)

RFP No.:
PAL- 0000093741

Drawing Title:
Transformer room
DETAILS -3

Design
EMCC

Checked
EMCC

Drawing NO.
TR -09

Scale:
AS DRAWINGS

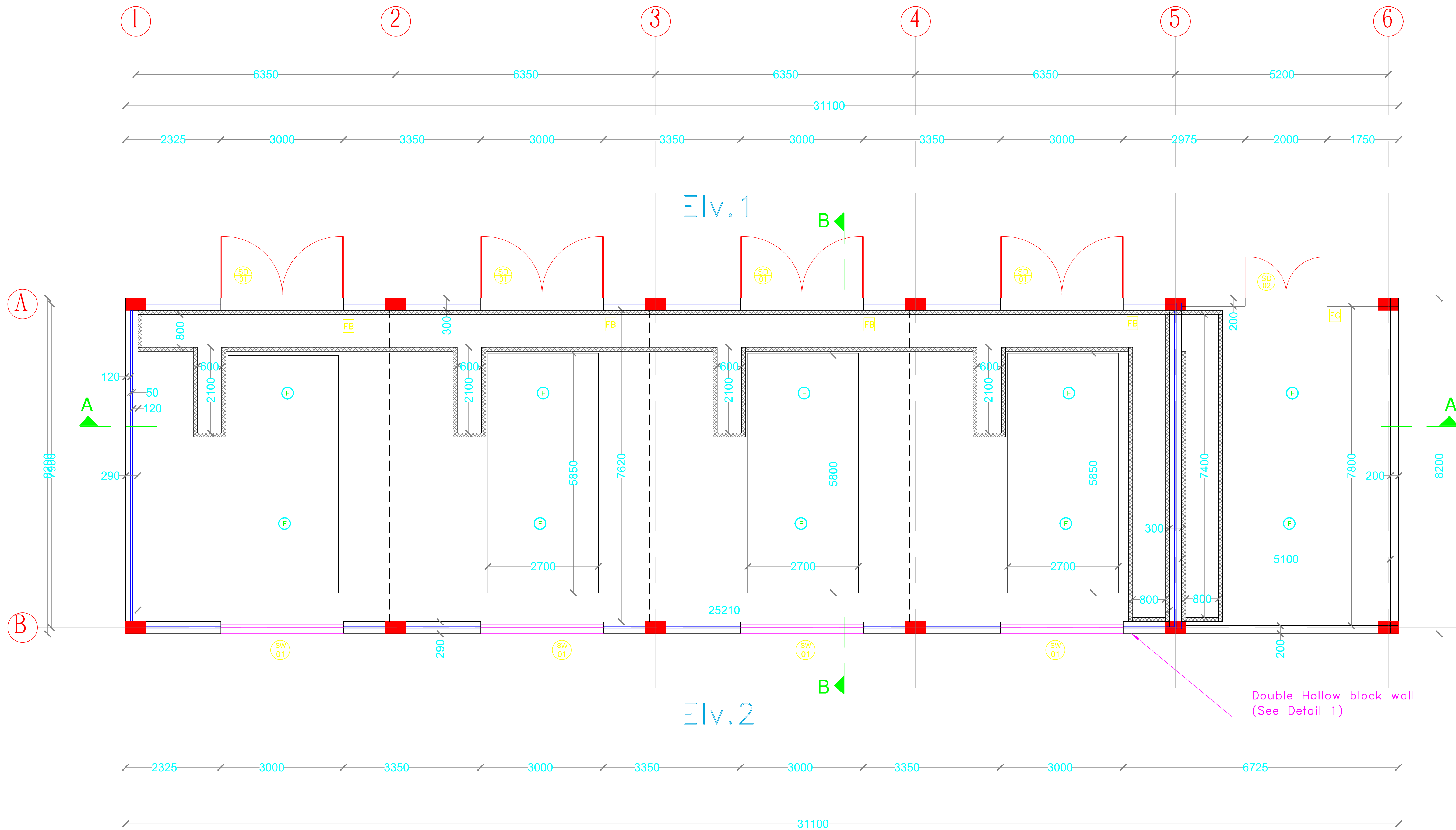
Date:
MAY. 2020

Transformers Building

DRAWING NAME	DRAWING NO.
Existing & demolish plan	TRF - 01
Partitions & Trenches	TRF - 02
Details	TRF- 03
Electrical Installations	TRF- 04

Generators Building

DRAWING NAME	DRAWING NO.
Ground Floor Layout	GR - 01
Rainwater & Elevation.	GR - 02
Elevation.	GR - 03
Sections	GR - 04
Details -1	GR - 05
Details -2	GR - 06
Details -3	GR - 07
Details -4	GR - 08
Electrical Installations-1	GR - 09
Electrical Installations-2	GR - 10
Site Layout and Fuel Tanks	GR - 11
Columns & Foundation Layouts	GR - 12
Floor & Roof Layouts	GR - 13
STR Details-1	GR - 14
STR Details-2	GR - 15



Notes:	
Auto Fire Extinguisher 2.5kg	F
(5kg) powder fire extinguisher	FB
(6kg) (BCF) gas fire extinguisher	FG

Donor

 Norwegian Ministry of Foreign Affairs

Client

 UNDP

CONSULTANT

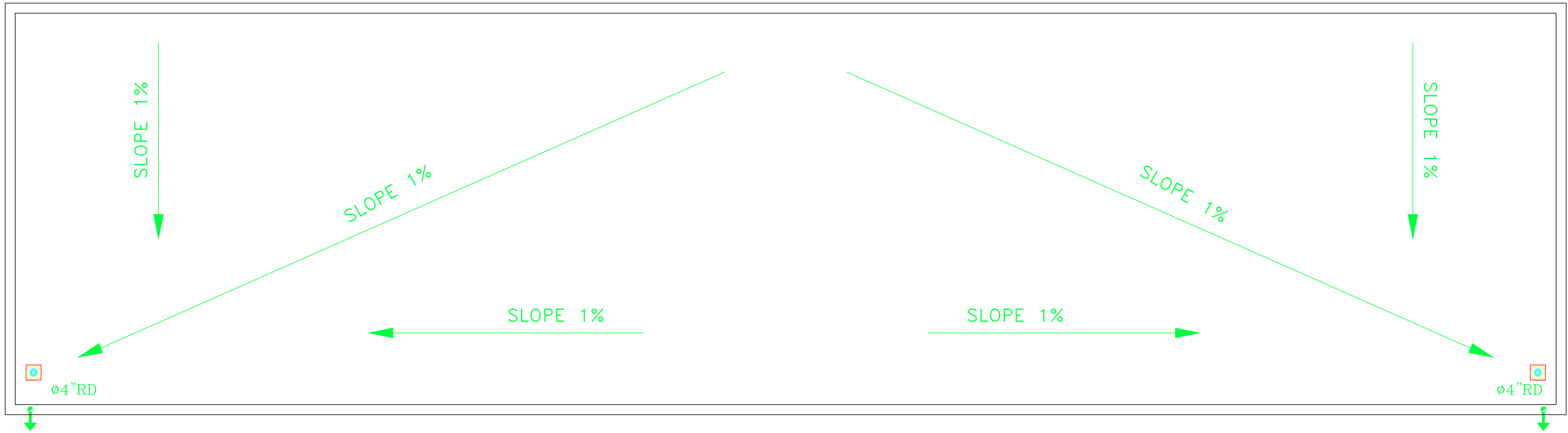
 EMCC

Project Name:
Provision of Detailed Design and Technical Assistance Services for the Construction of Solar Energy System for Khan Younis Waste Water Treatment Plant (KY WWTP)

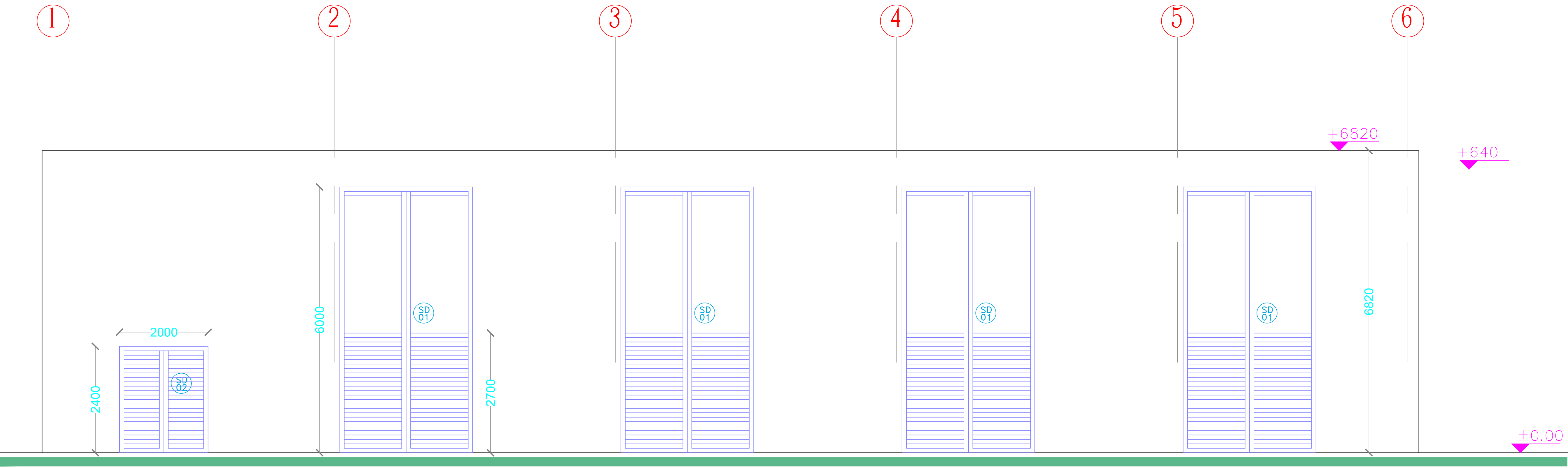
RFP No.: PAL- 0000093741

Drawing Title: Generators Building
Ground Floor Layout

Design	EMCC
Checked	EMCC
Drawing NO.	GR01
Scale:	AS DRAWINGS
Date:	Jan. 2021



Rainwater Drainage Plan



Elv.1

Notes:

Donor

 Norwegian Ministry of Foreign Affairs

Client



CONSULTANT



Project Name:

Provision of Detailed Design and Technical Assistance Services for the Construction of Solar Energy System for Khan Younis Waste Water Treatment Plant (KY WWTP)

RFP No.:

PAL- 0000093741

Drawing Title:

Generator Room
Rainwater & Elevation.

Design

EMCC

Checked

EMCC

Drawing NO.

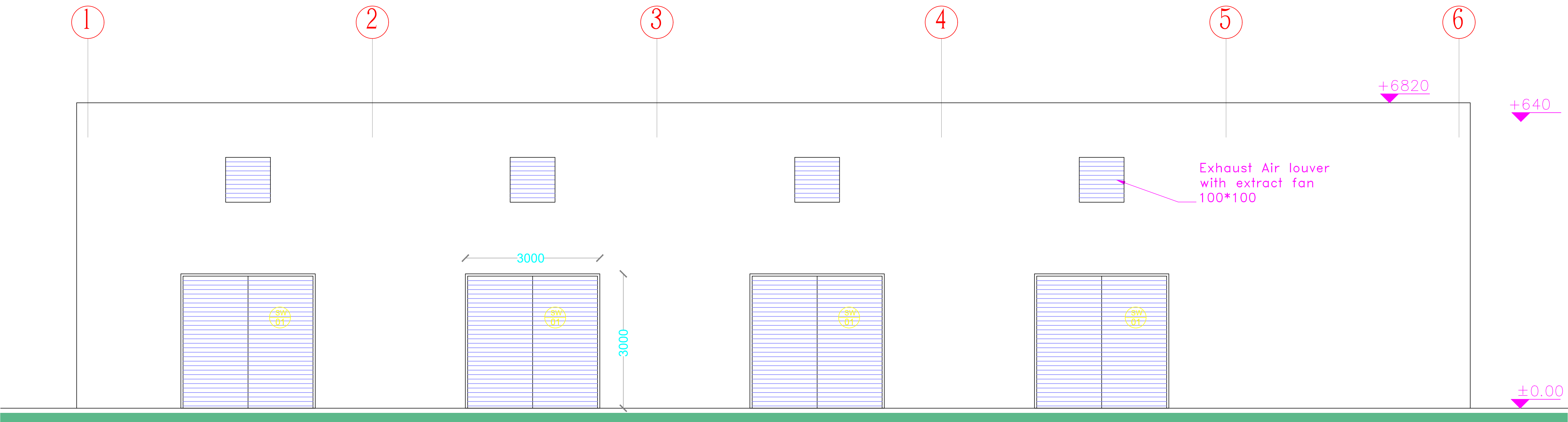
GR02

Scale:

AS DRAWINGS

Date:

Jan. 2021



Elev.2

Notes:

Donor

 Norwegian Ministry of Foreign Affairs

Client



CONSULTANT



Project Name:

Provision of Detailed Design and Technical Assistance Services for the Construction of Solar Energy System for Khan Younis Waste Water Treatment Plant (KY WWTP)

RFP No.:

PAL- 0000093741

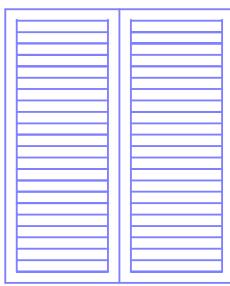
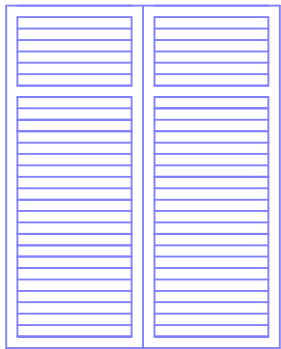
Drawing Title:

Generators Building Elevation.

Design	EMCC
Checked	EMCC
Drawing NO.	GR 03
Scale:	AS DRAWINGS
Date:	Jan. 2021



Date:	Jan. 2021
-------	-----------

DOORS SCHEDULE					
TYPE	HEIGHT/CM	WIDTH/CM	QUANTITY	Describing	Elevation
SD 01	6000	3000	4	Steel Door	
SD 02	2400	2000	1	Steel Door	

WINDOWS SCHEDULE					
TYPE	HEIGHT/M	WIDTH/M	QUANTITY	Describing	Elevation
SW 01	3000	3000	4	Steel Window	

Notes:

Donor

Norwegian Ministry of Foreign Affairs

Client



CONSULTANT



Project Name:

Provision of Detailed Design and Technical Assistance Services for the Construction of Solar Energy System for Khan Younis Waste Water Treatment Plant (KY WWTP)

RFP No.:

PAL- 0000093741

Drawing Title:

Generators Building Details -1

Design

EMCC

Checked

EMCC

Drawing NO.

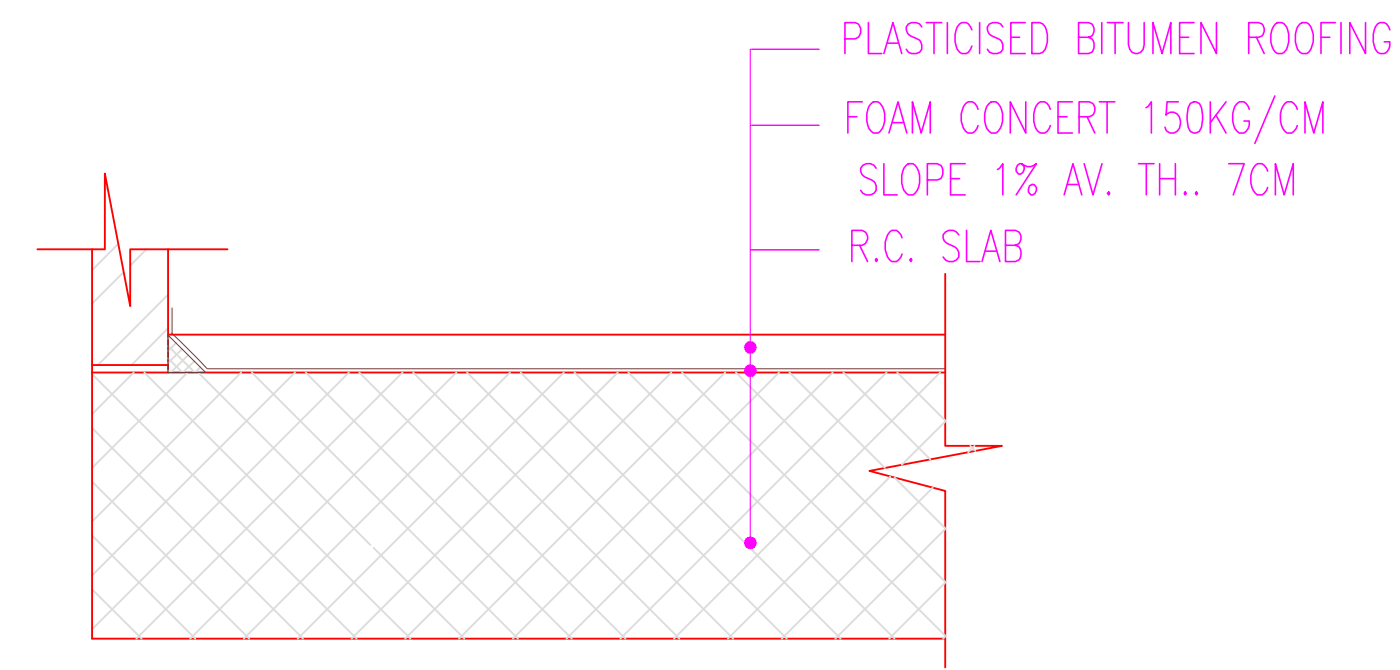
GR 05

Scale:

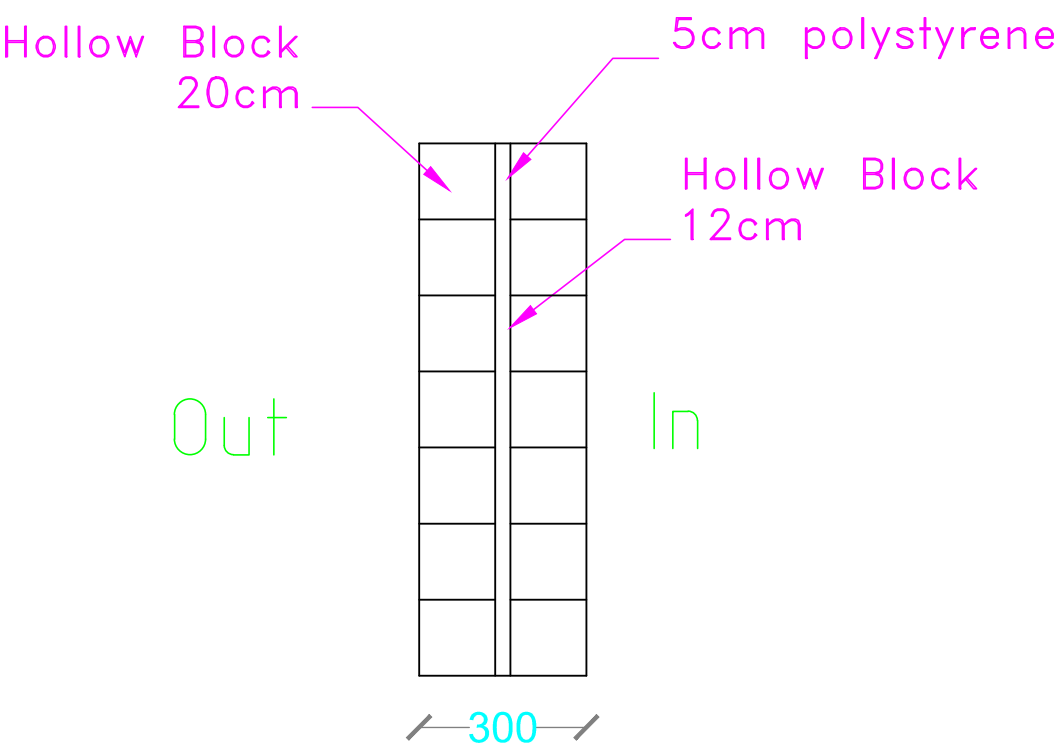
AS DRAWINGS

Date:

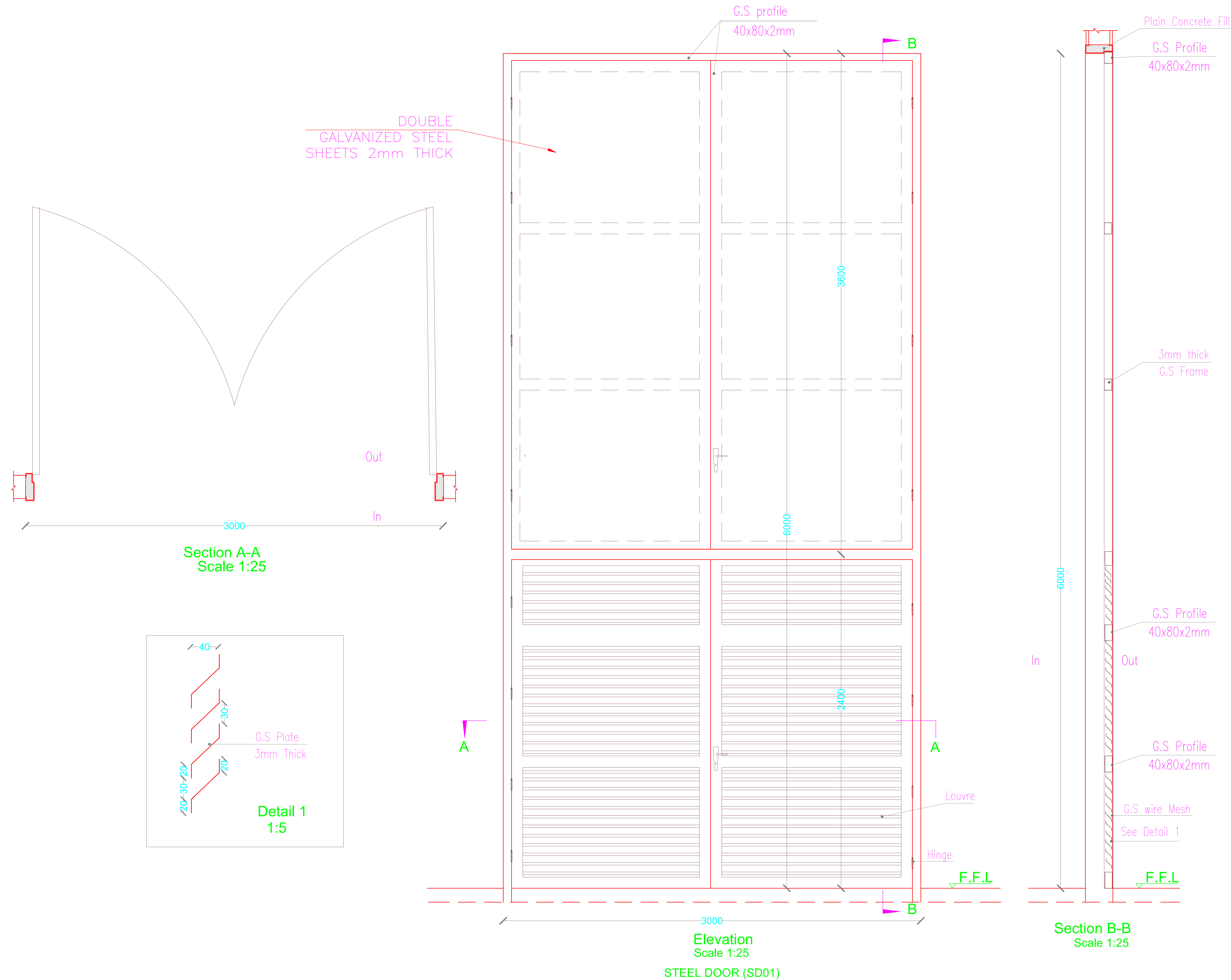
Jan. 2021



Typical Roof Details
N.T.S



Section Of Wall
Detail -1
N.T.S



Notes:

Donor



Project Name:
Provision of Detailed Design and Technical Assistance Services for the Construction of Solar Energy System for Khan Younis Waste Water Treatment Plant (KY WWTP)

RFP No.:
PAL- 0000093741

Drawing Title: Generator Room
DETAILS -2

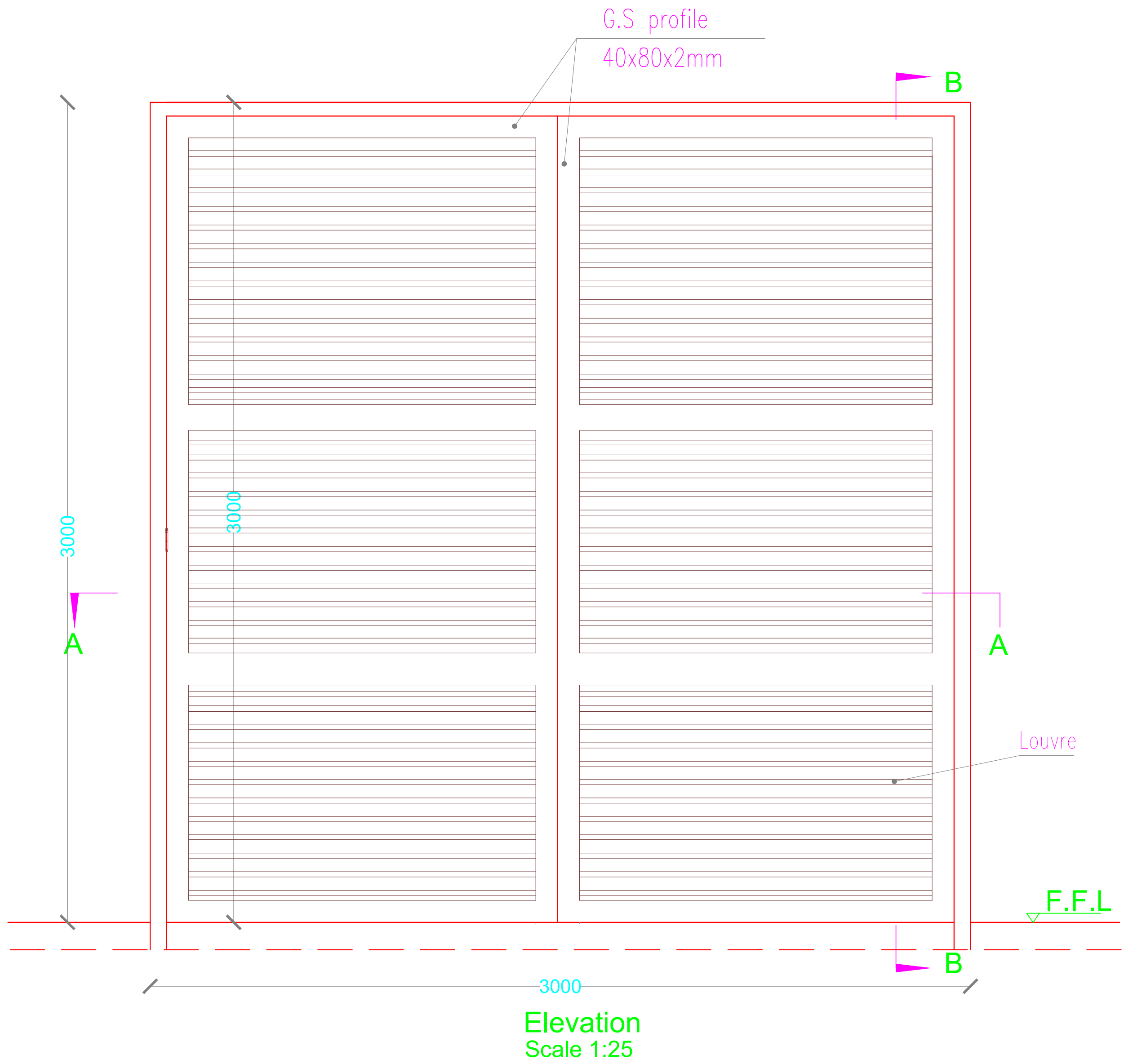
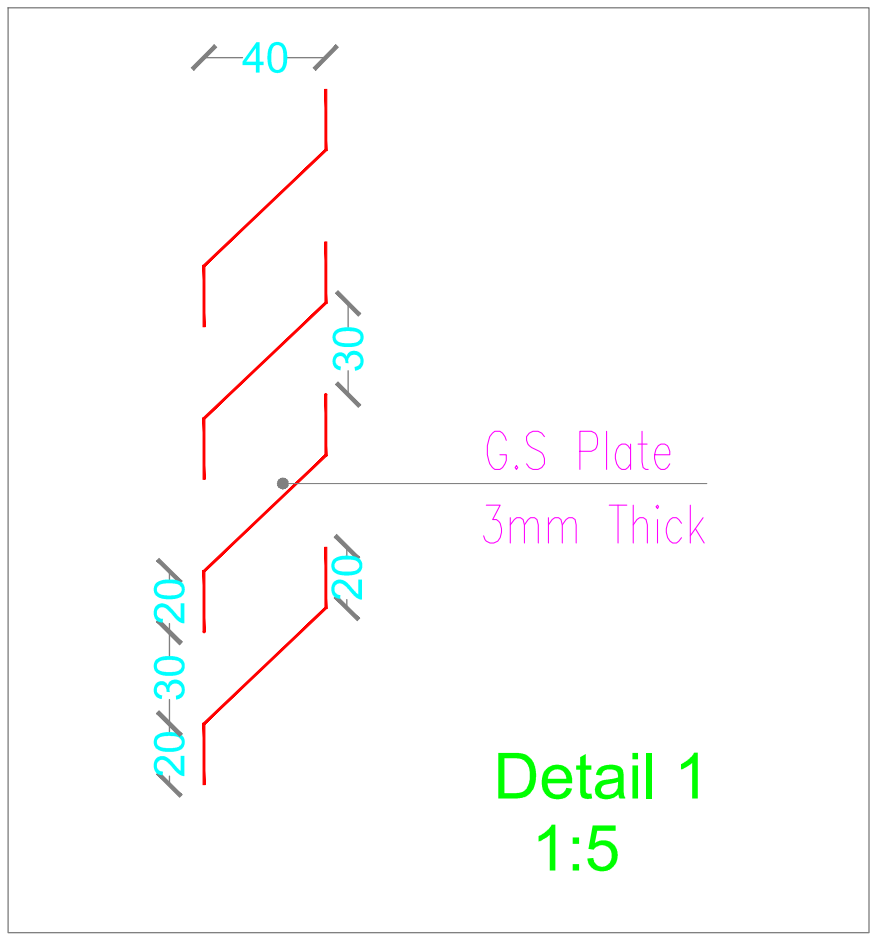
Design: EMCC

Checked: EMCC

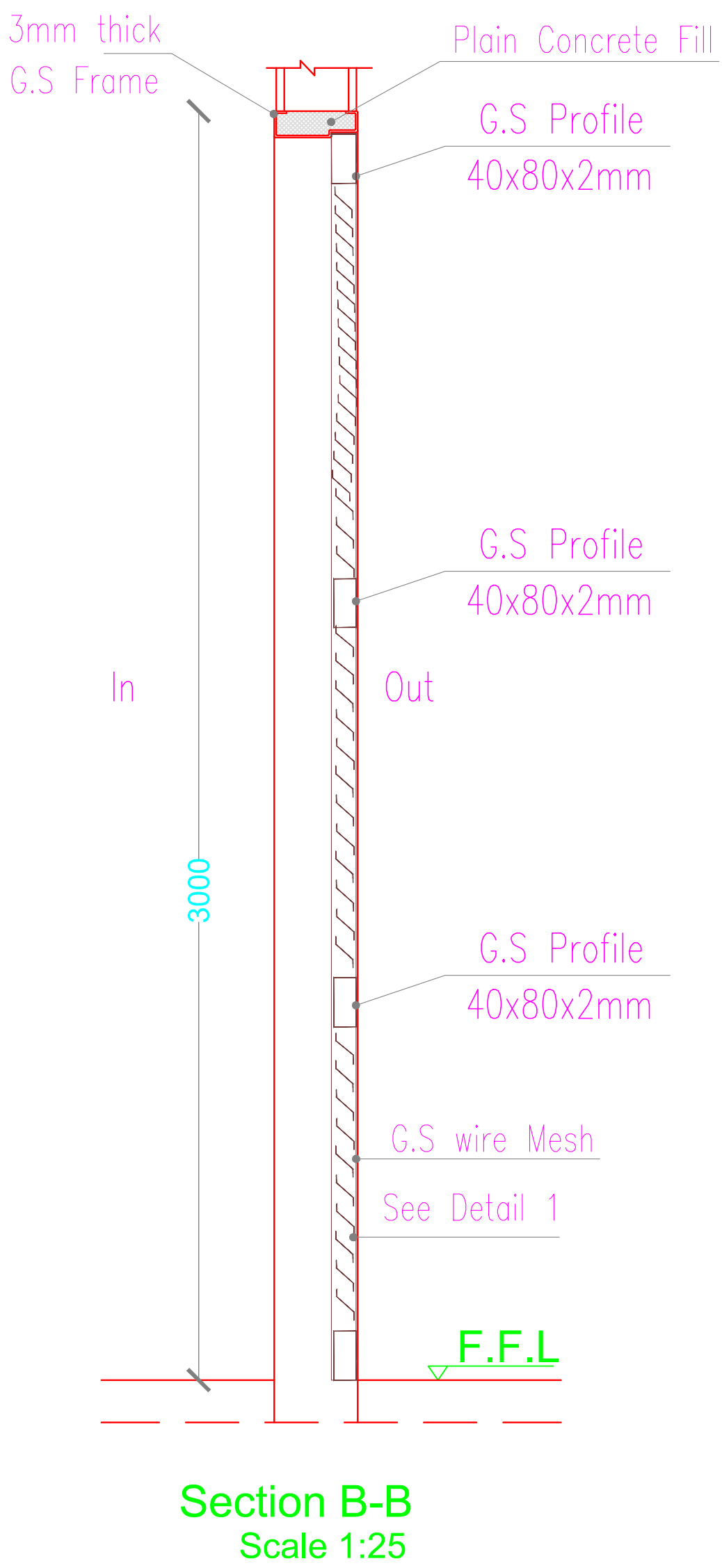
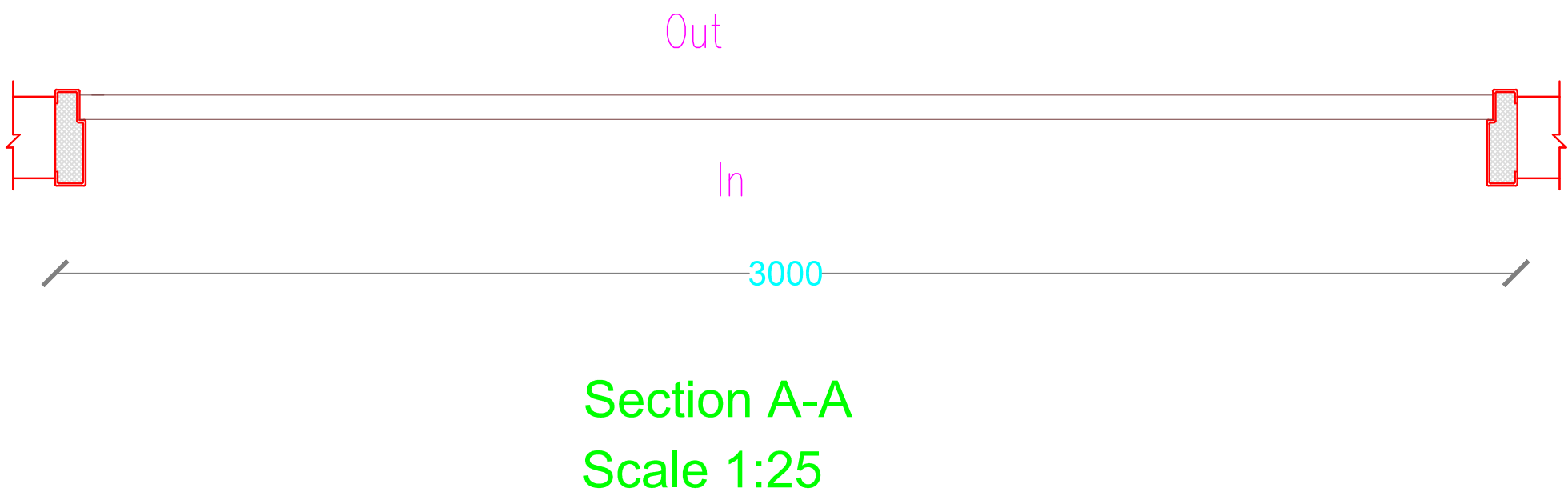
Drawing NO: GR 06

Scale: AS DRAWINGS

Date: Jan. 2021



STEEL WINDOWS (SW01)



Notes:

Donor

 Norwegian Ministry
of Foreign Affairs

Client



CONSULTANT



Project Name:
Provision of Detailed Design and Technical
Assistance Services for the Construction of
Solar Energy System for Khan Younis Waste
Water Treatment Plant (KY WWTP)

RFP No.:
PAL- 0000093741

Drawing Title: Generators Building
DETAILS -3

Design EMCC

Checked EMCC

Drawing NO. GR 07

Scale: AS DRAWINGS

Date: Jan. 2021

Notes:

Donor

 Norwegian Ministry of Foreign Affairs

Client



CONSULTANT



Project Name:
Provision of Detailed Design and Technical Assistance Services for the Construction of Solar Energy System for Khan Younis Waste Water Treatment Plant (KY WWTP)

RFP No.:
PAL- 0000093741

Drawing Title: Generator Room
DETAILS -4

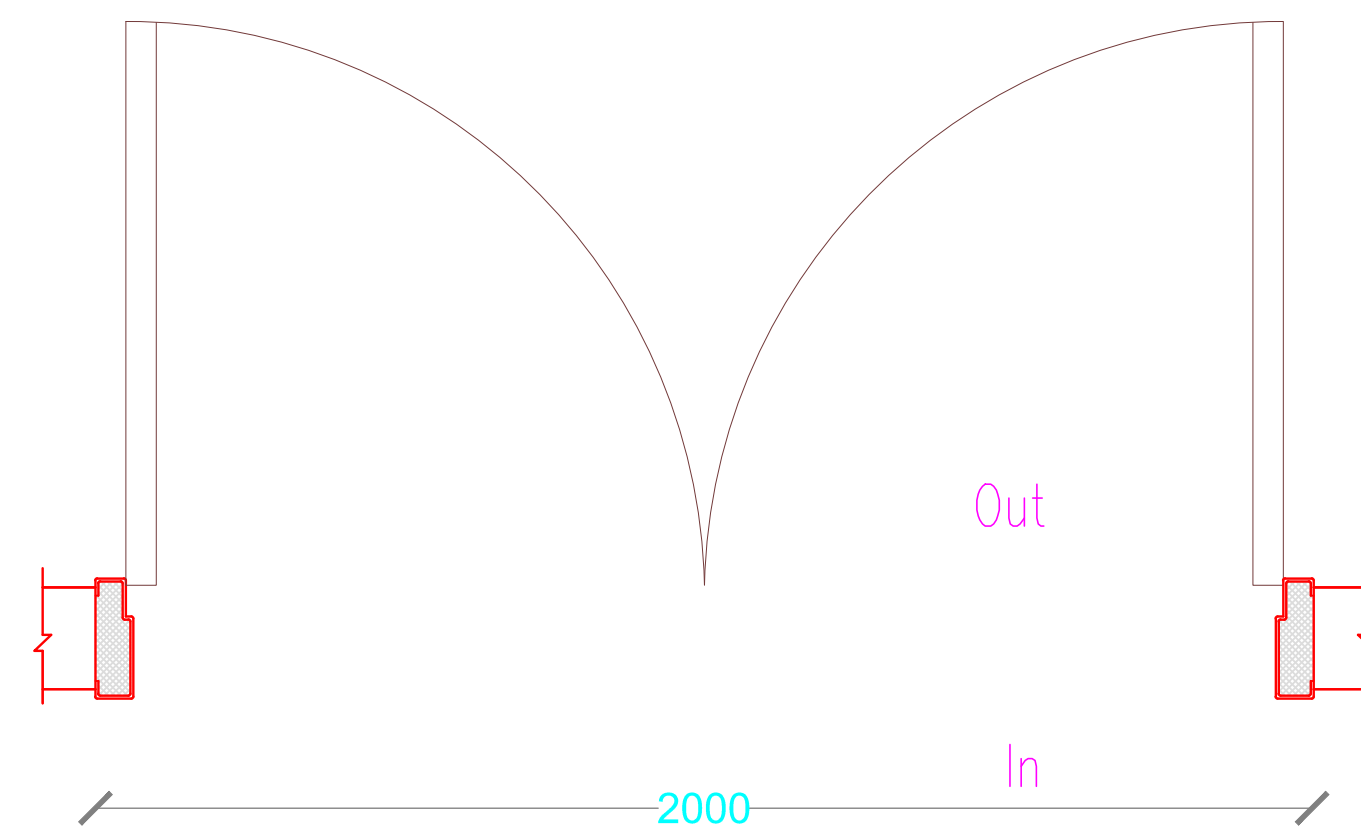
Design EMCC

Checked EMCC

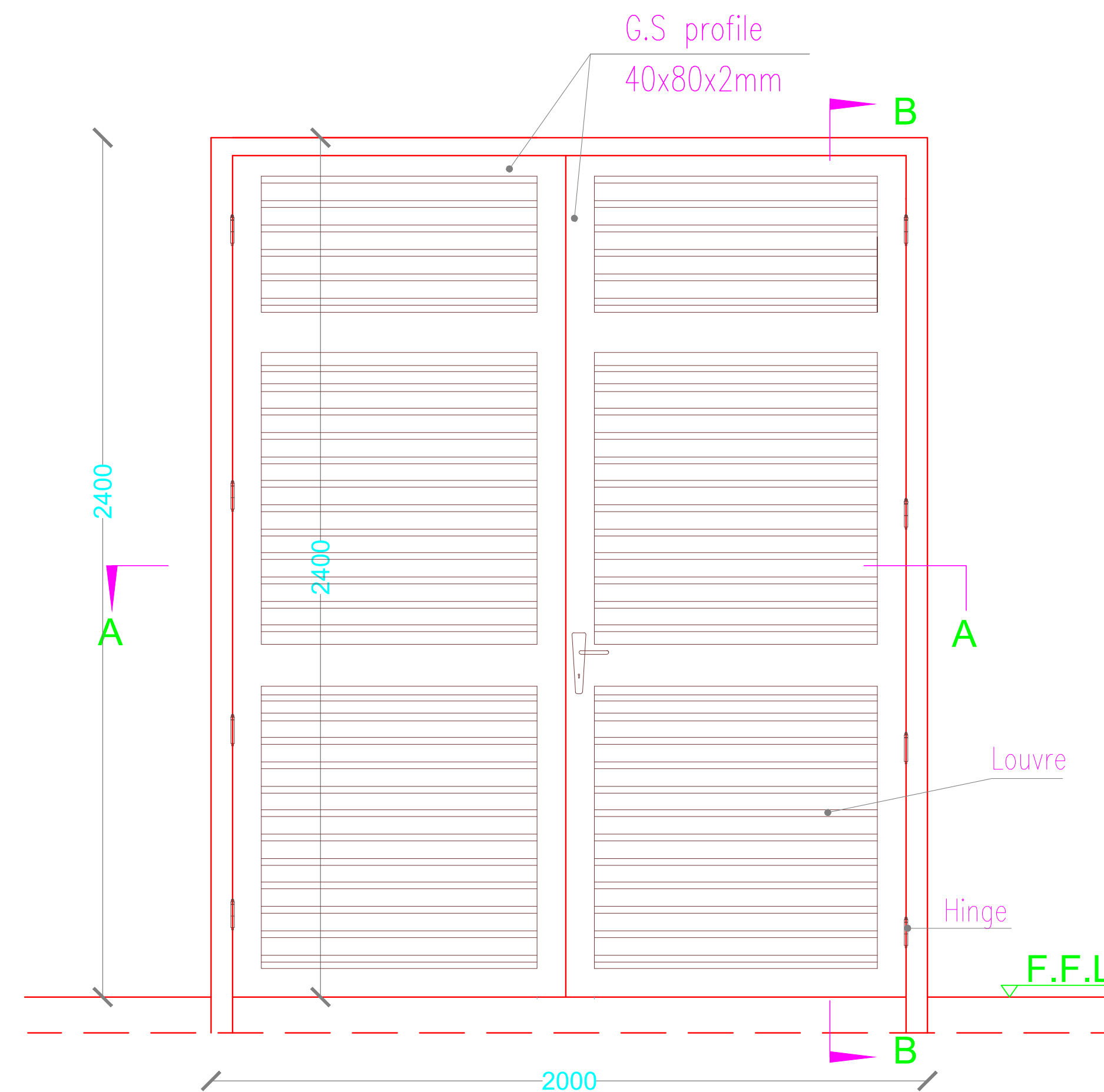
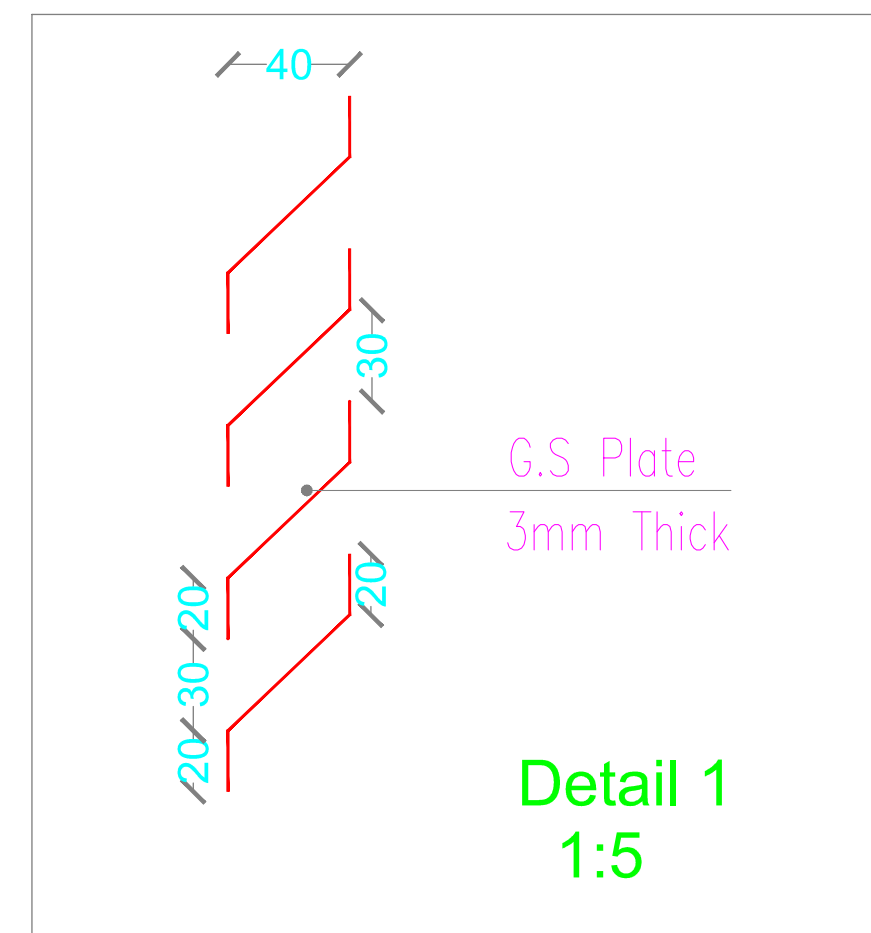
Drawing NO. GR 08

Scale: AS DRAWINGS

Date: Jan. 2021

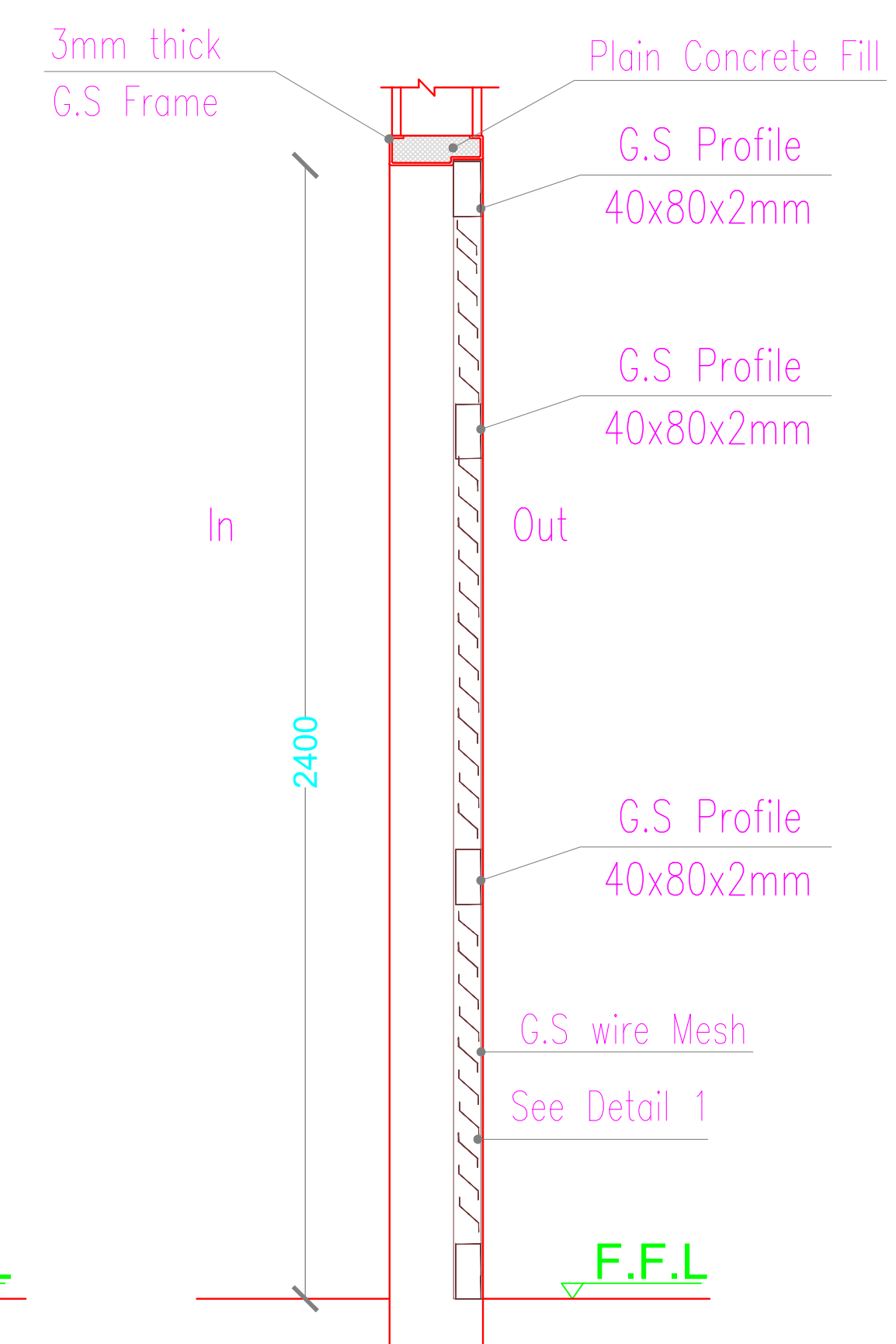


Section A-A
Scale 1:25

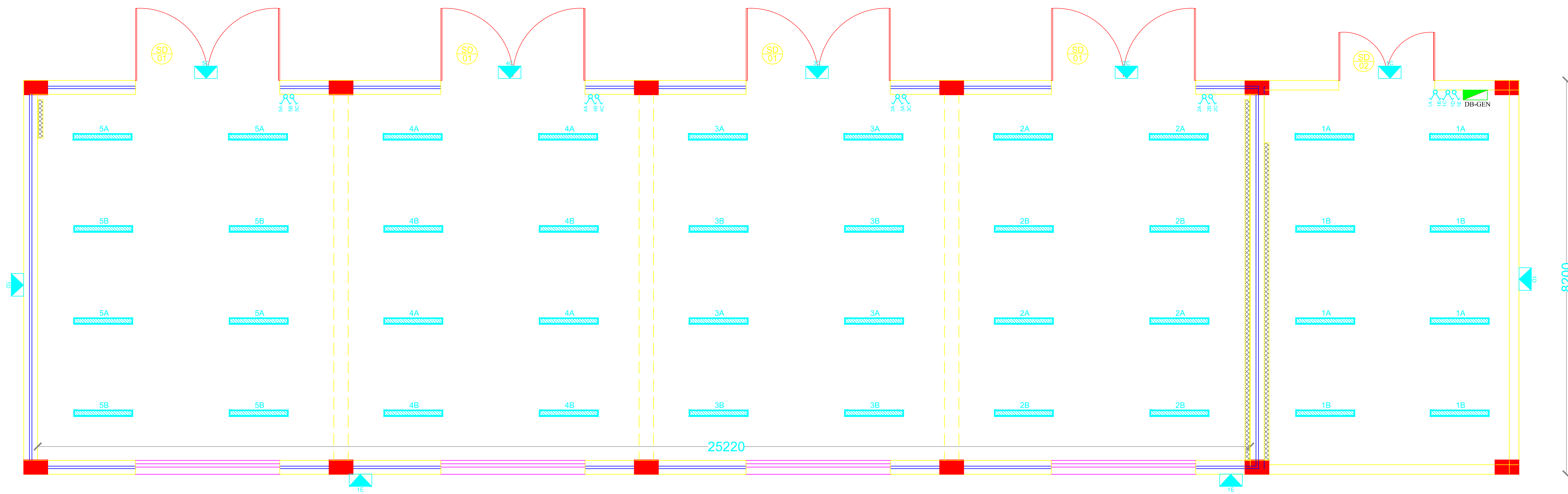
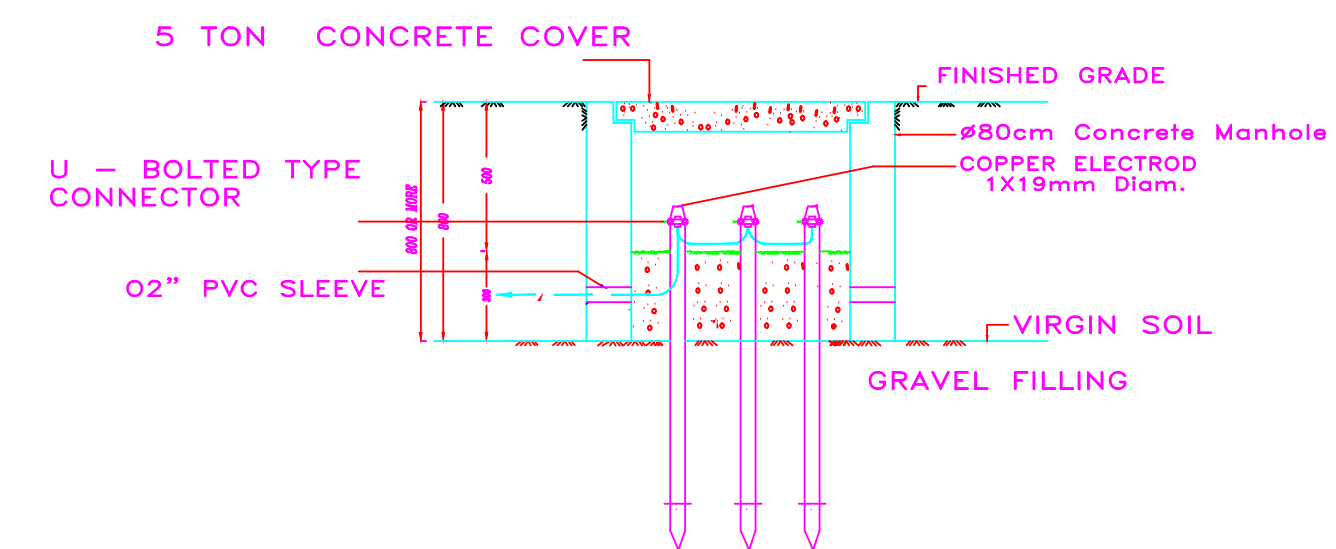
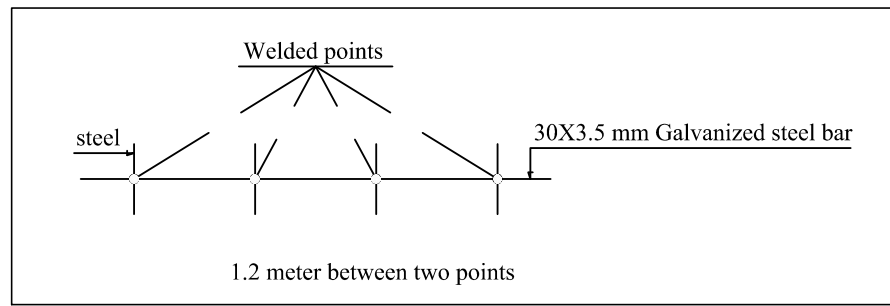


Elevation
Scale 1:25

STEEL DOOR (SD02)



Section B-B
Scale 1:25



Notes:

SYMBOL	DESCRIPTION
	3/4" SPEAKER MOUNTED ON LIGHTING FIXTURE WITH OUT RECESSED IN-PA.
	50W EXTERNAL WALL MOUNTED LED LIGHT PXS.
	ONE GMR. ONE WAY LIGHTING SWITCH-10A.
	TWO GMR. ONE WAY LIGHTING SWITCH-10A.
	16A SINGLE PHASE, 3-WAY SOCKET OUTLET.
	SUN DISTRIBUTION BOARD, HOT/STEEL, THICKNESS 2 mm 400/500W
	BRIDGE PHASE, THREE PHASE SOURCE BOARD, THICKNESS 2mm 600/900W
	MIN. CIRC. CIRCUIT BREAKER, 100A/250V/100A, TYPE: GMR.
FIRE ALARM & EVACUATION SYSTEM	
	FIRE ALARM CONVENTIONAL SMOKE DETECTOR.
	FIRE ALARM MANUAL CALL POINT, CONVENTIONAL BREAK GLASS.
	1W-63 FIRE ALARM Siren WITH FLASHING LAMP.
	CONVENTIONAL FIRE ALARM CONTROL PANEL, 2 ZONES WITH 700W STANDBY CONSUMABLE BATTERIES.

Electrical Symbols

Electrical Symbols

The logo of the Norwegian Ministry of Foreign Affairs is displayed. It consists of a square frame divided into two sections. The left section contains the coat of arms of Norway, which is a red lion rampant on a white background. The right section contains the text "Norwegian Ministry of Foreign Affairs" in a black, serif font, arranged in two lines.

Client



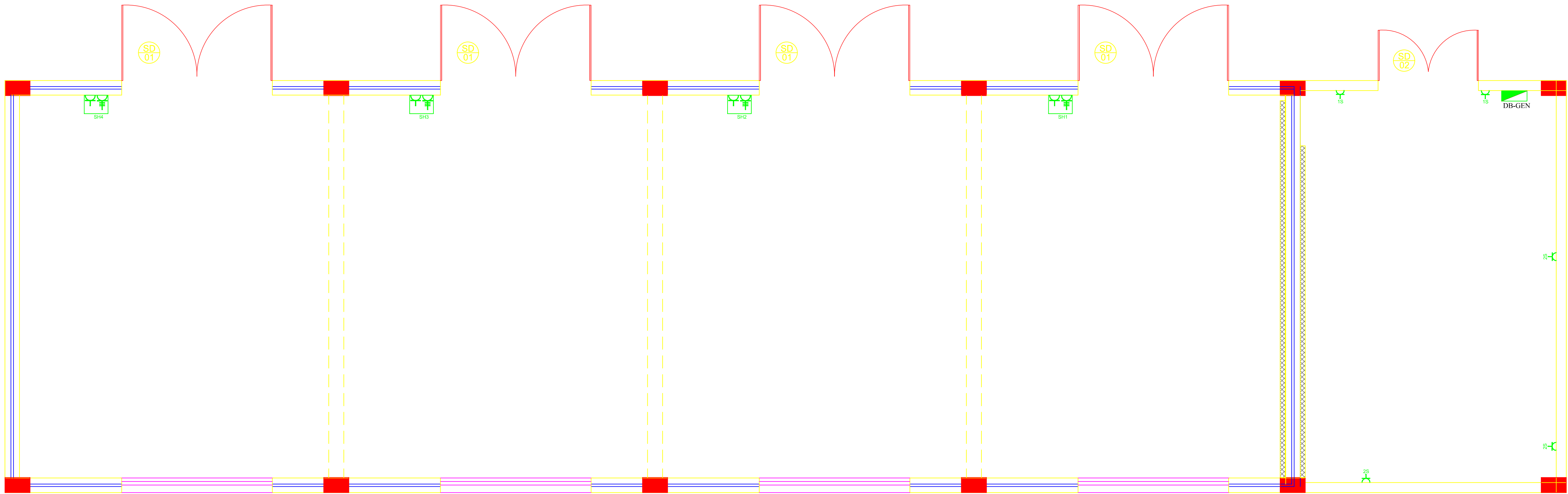
The logo of the United Nations Development Programme (UNDP) is displayed. It consists of a blue square containing the United Nations emblem (a world map surrounded by olive branches) at the top, and the letters 'U' and 'N' in the top half, and 'D' and 'P' in the bottom half, all in white.

Project Name:
Provision of Detailed Design and Technical Assistance Services for the Construction of Solar Energy System for Khan Younis Waste Water Treatment Plant (KY WWTP)

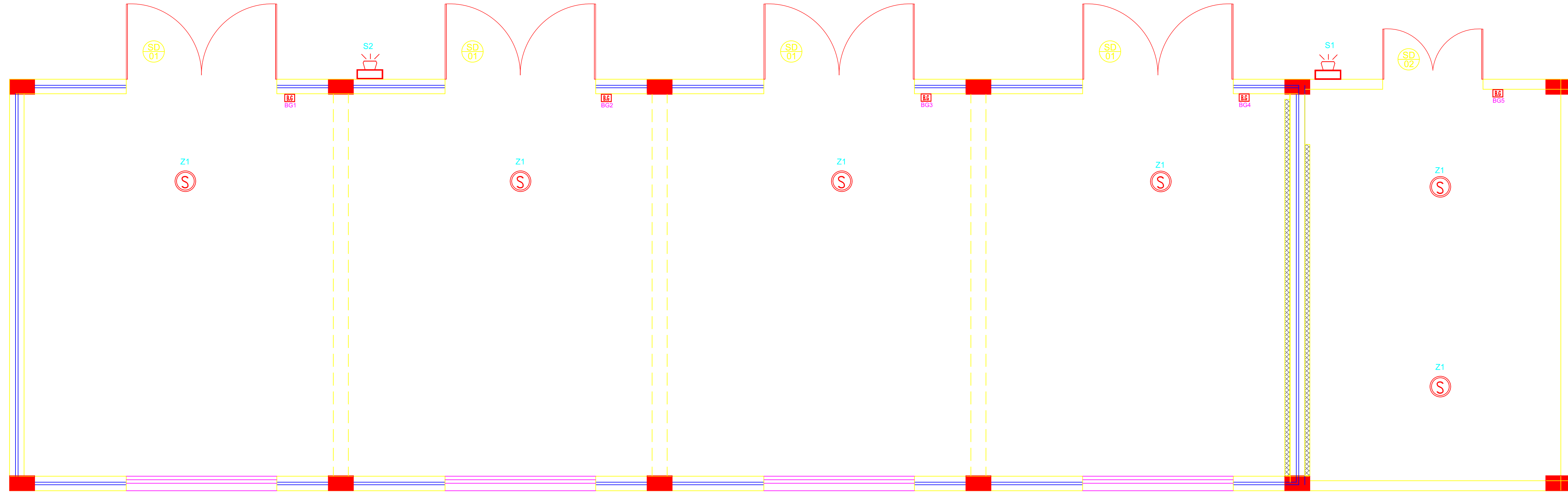
RFP No. : PAL- 0000093741

Drawing Title: Generators Building
Electrical Installations-1

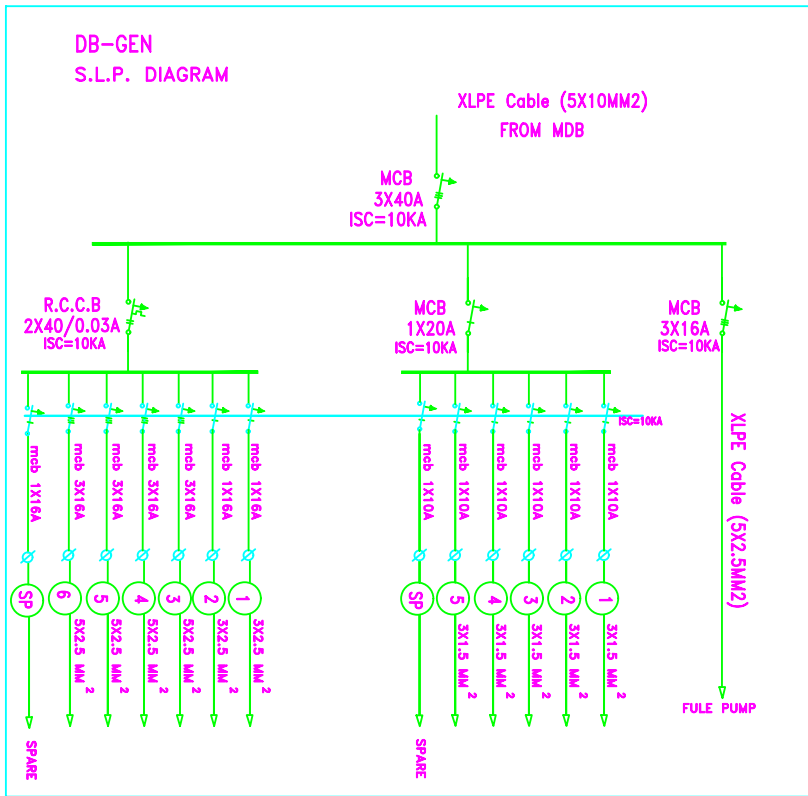
Design	EMCC
Checked	EMCC
Drawing NO.	GR 09
Scale:	AS DRAWINGS
Date:	Jan. 2021



POWER PLAN FOR GEN BUILDING



FIRE ALARM SYSTEM PLAN FOR GEN BUILDING



Notes:

SYMBOL	DESCRIPTION
	THE SURFACE MOUNTED LED LIGHTING FIXTURE WITH OUT REFLECTOR IP40.
	50W EXTERNAL WALL MOUNTED LED LIGHT IP40.
	ONE GANG, ONE WAY LIGHTING SWITCH-10A.
	TWO GANG, ONE WAY LIGHTING SWITCH-10A.
	15A SINGLE PHASE, 3-PIN SOCKET OUTLET.
	RIB DISTRIBUTION BOARD - HOT & COLD THICKNESS 2 mm 400/500V
	SINGLE PHASE & THREE PHASE SOCKET PANEL SURFACE MOUNTED WITH CIRCUIT BREAKER 3X16A/10KA TYPE GENCO

FIRE ALARM & EVACUATION SYSTEM

	FIRE ALARM CONVENTIONAL SMOKE DETECTOR.
	FIRE ALARM MANUAL CALL POINT, CONVENTIONAL BREAK GLASS.
	SP-65 FIRE ALARM SIREN WITH FLASHING LAMP.
	CONVENTIONAL FIRE ALARM CONTROL PANEL & ZONES WITH 220V STAND-BY CHARGEABLE BATTERIES.

Electrical Symbols

Donor

Norwegian Ministry of Foreign Affairs

Client

UNDP

CONSULTANT

EMCC

Project Name:
Provision of Detailed Design and Technical Assistance Services for the Construction of Solar Energy System for Khan Younis Waste Water Treatment Plant (KY WWTP)

RFP No.:
PAL- 0000093741

Drawing Title:
Generator Room
Electrical Installations-2

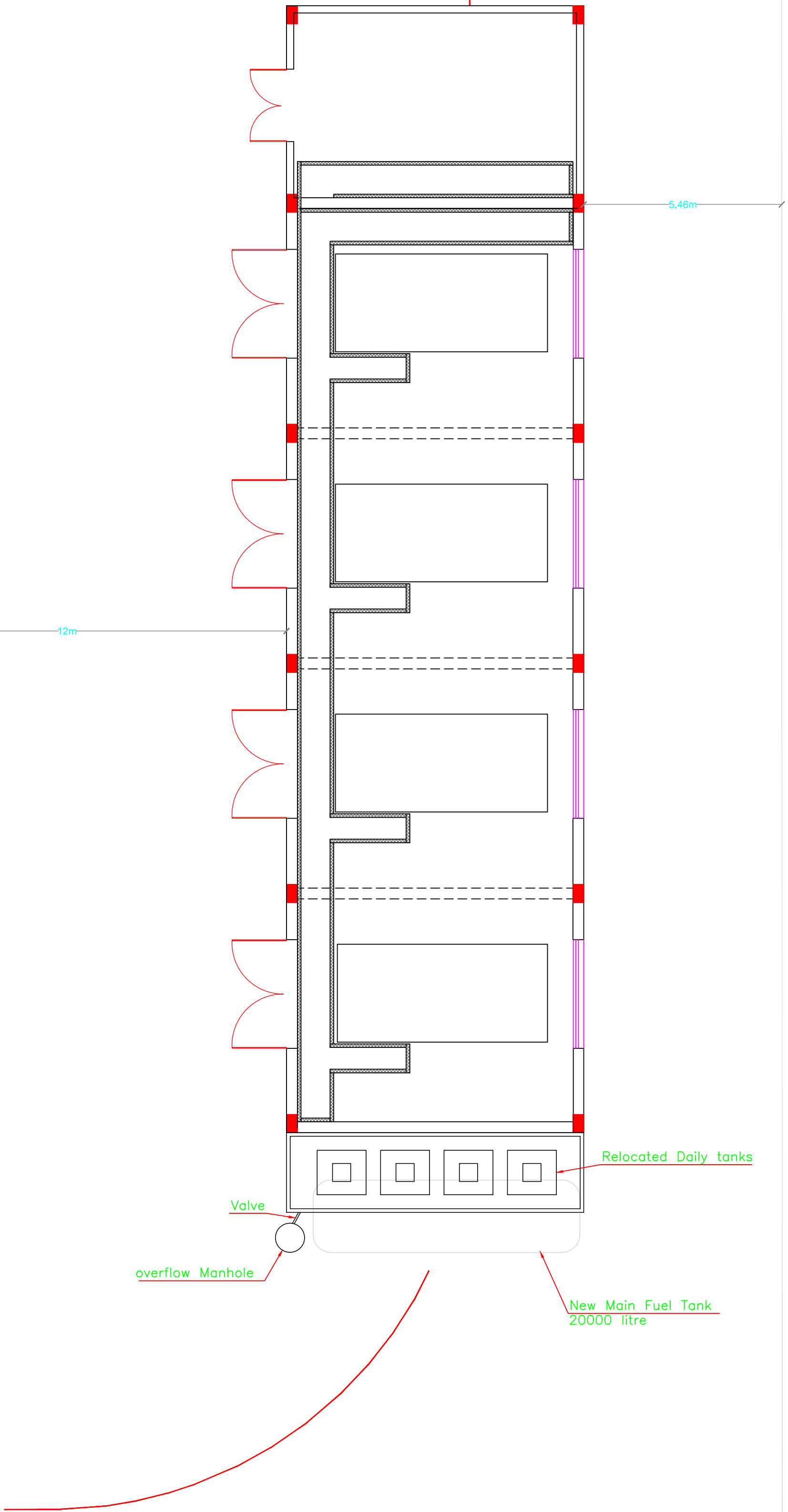
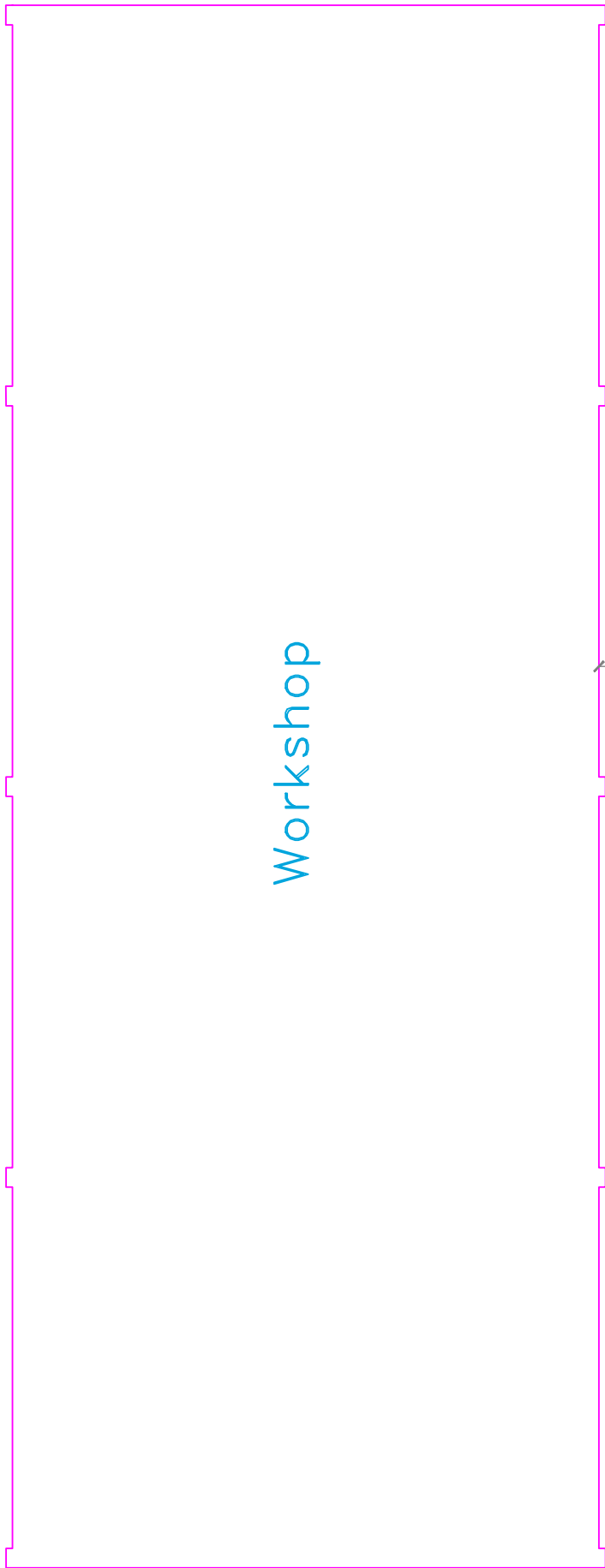
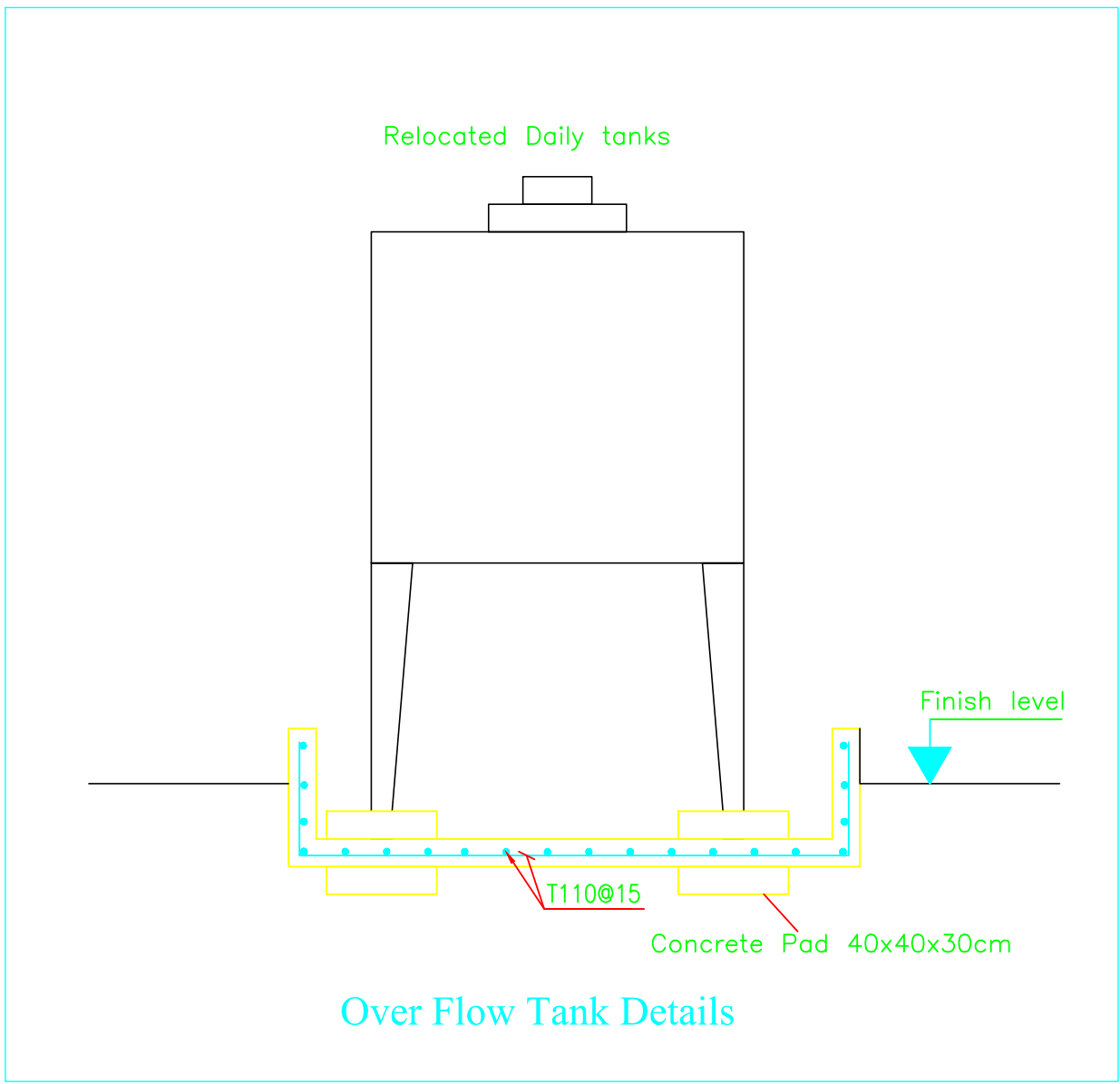
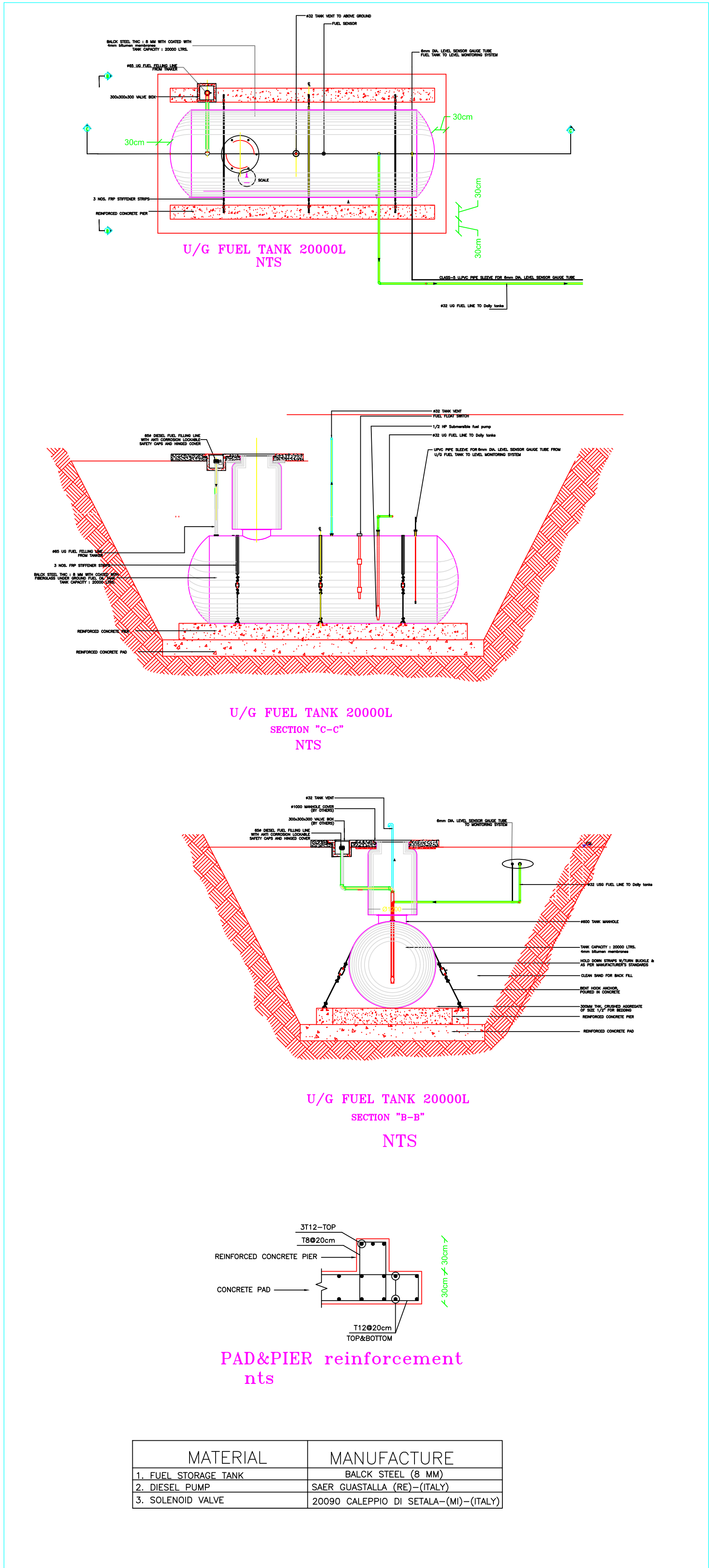
Design
EMCC

Checked
EMCC

Drawing NO.
GR 10

Scale:
AS DRAWINGS

Date:
Jan. 2021



Donor



Client



CONSULTANT



Project Name:
Provision of Detailed Design and Technical Assistance Services for the Construction of Solar Energy System for Khan Younis Waste Water Treatment Plant (KY WWTP)

RFP No.: PAL- 0000093741

Drawing Title: Generators Building Site Layout and Fuel Tanks

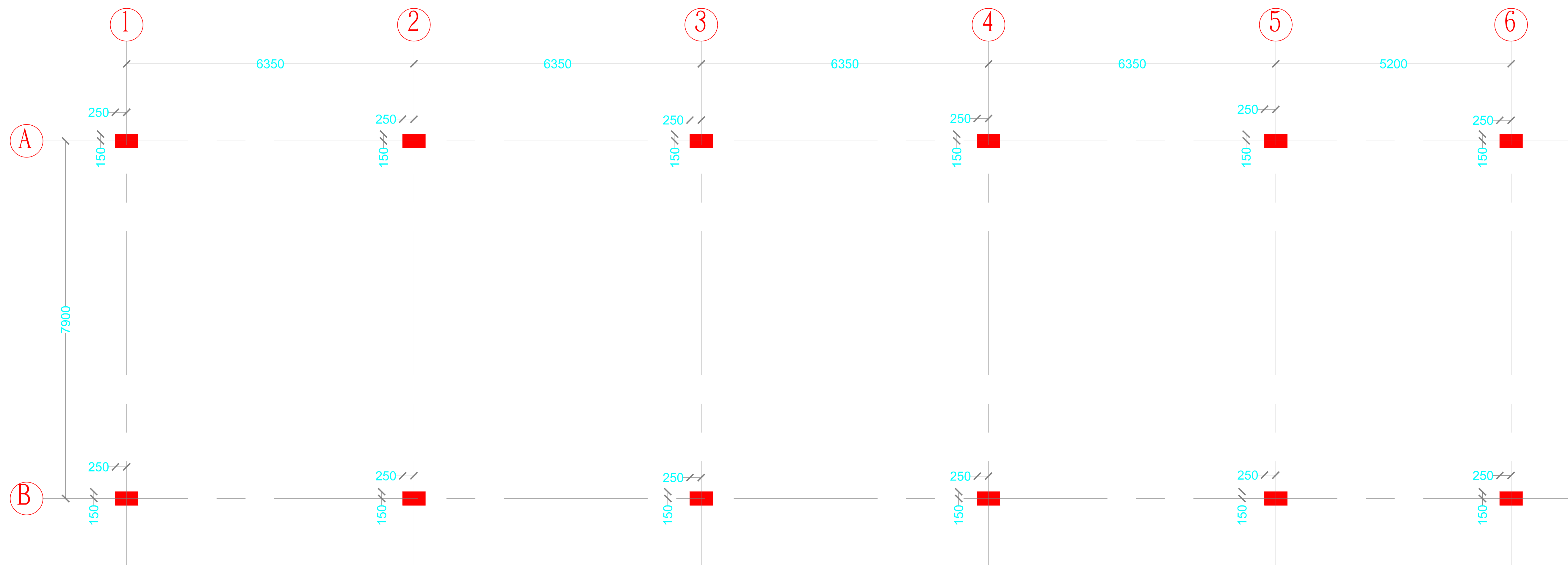
Design EMCC

Checked EMCC

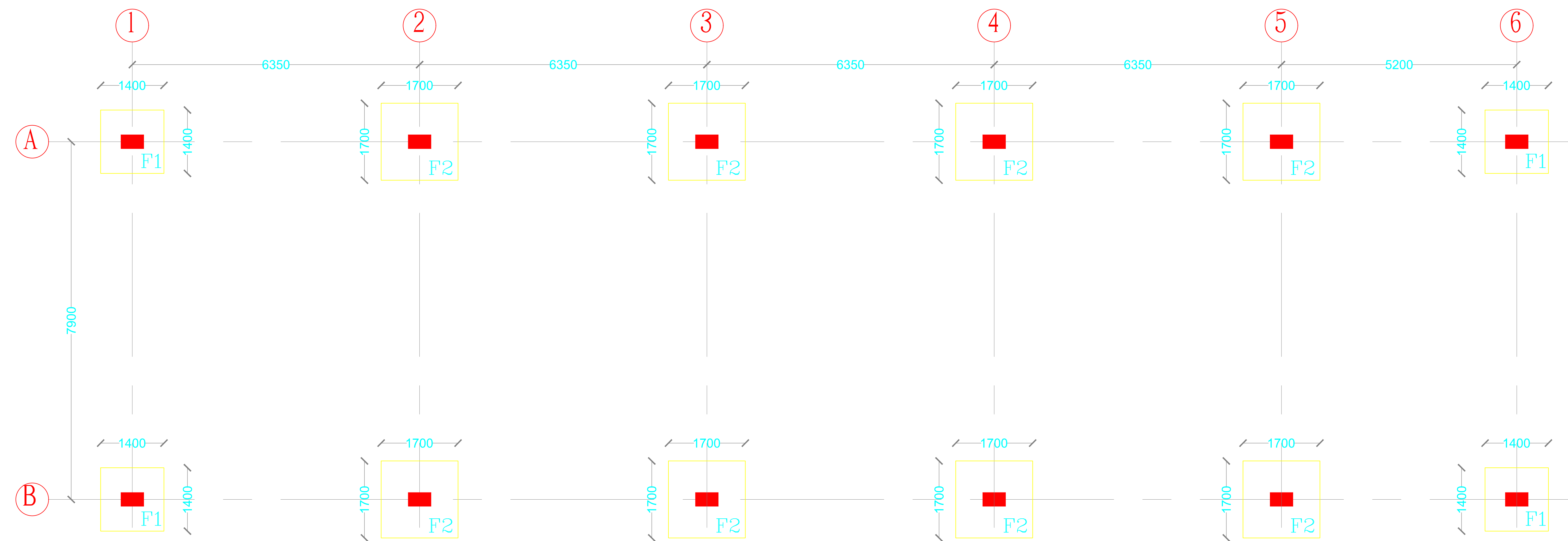
Drawing NO: G -11

Scale: 1:100

Date: Jan. 2021



Columns Layout



Foundation Layout

Notes:

Donor



Norwegian Ministry
of Foreign Affairs

Client



UN
DP

CONSULTANT

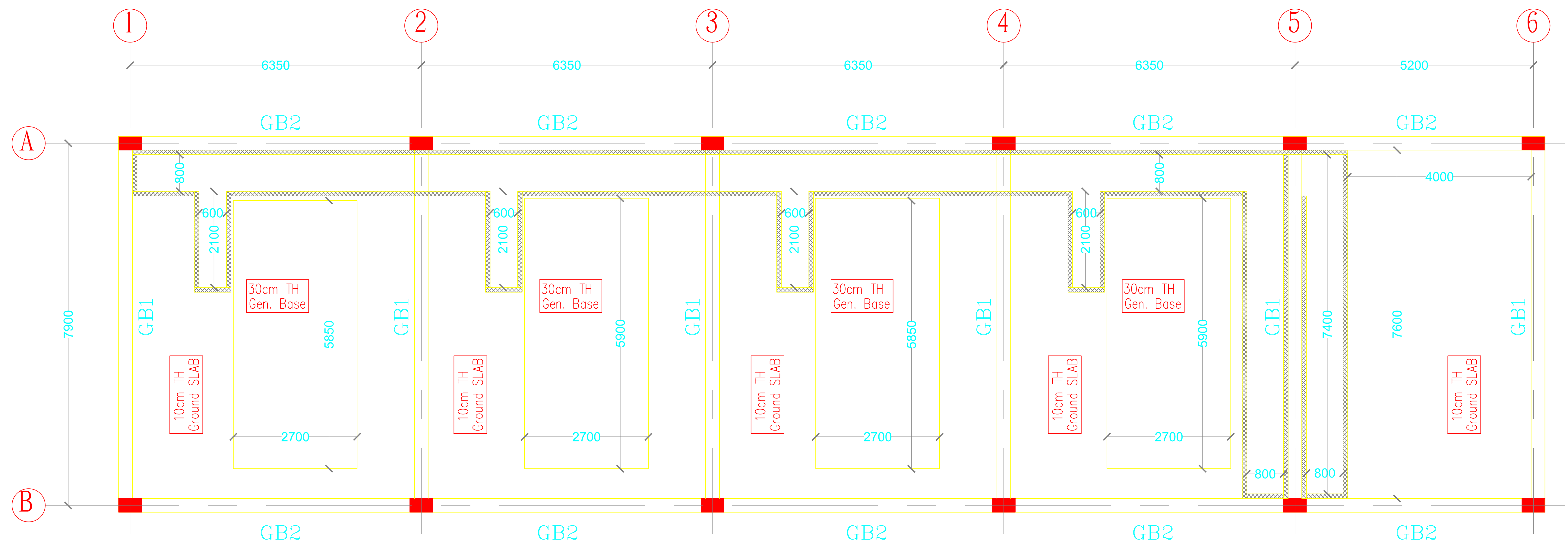


Project Name:
Provision of Detailed Design and Technical Assistance Services for the Construction of Solar Energy System for Khan Younis Waste Water Treatment Plant (KY WWTP)

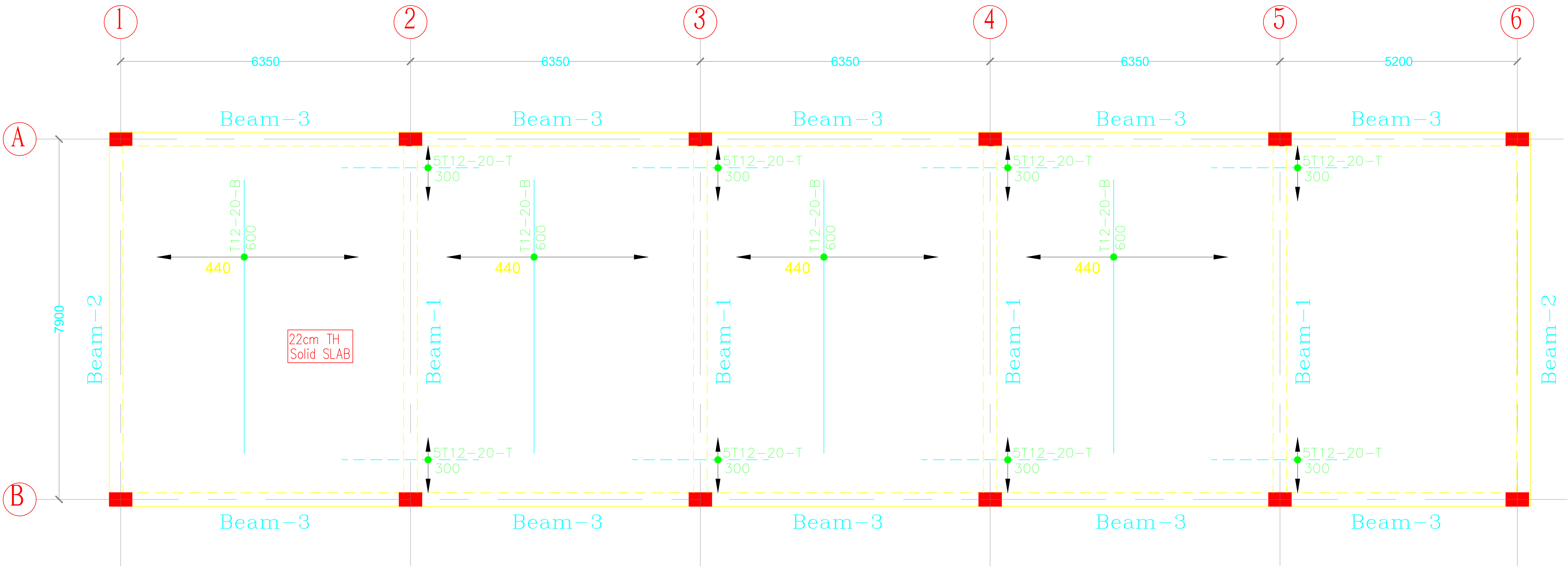
RFP No.: PAL- 0000093741

Drawing Title: Generators Building
Columns & Foundation Layouts

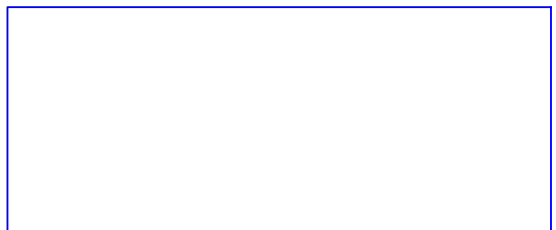
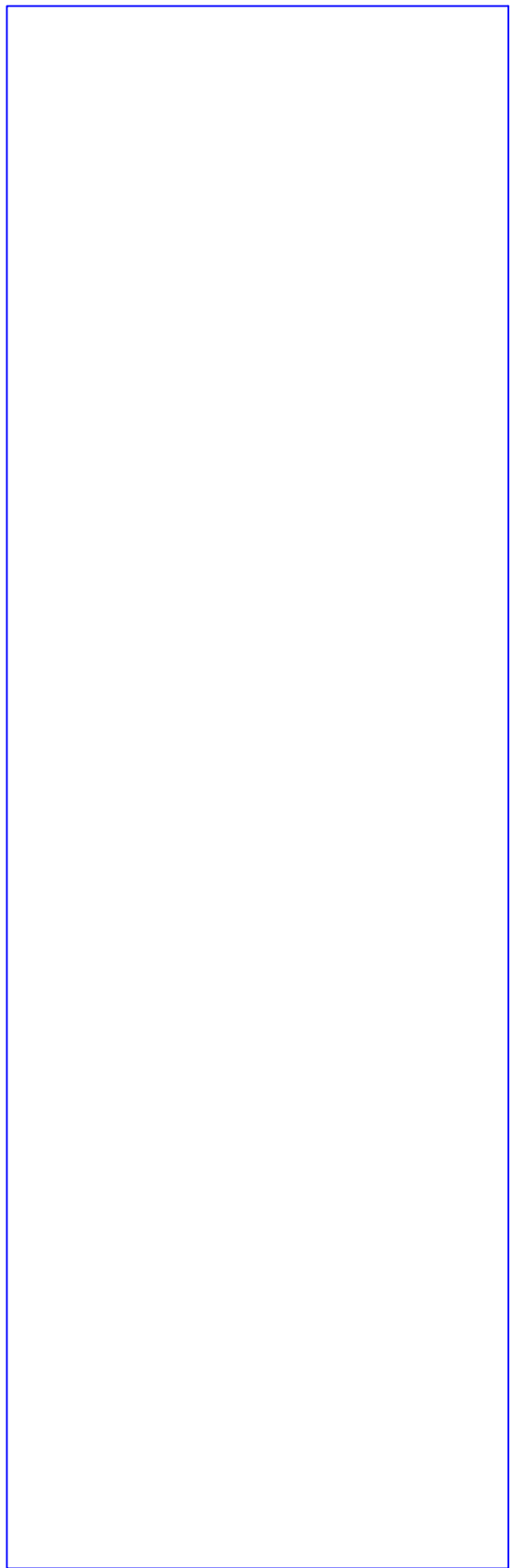
Design	EMCC
Checked	EMCC
Drawing NO.	GR 012
Scale:	1:100
Date:	Jan. 2021



Ground Slab Layout



Roof Layout



Project Name:
Provision of Detailed Design and Technical Assistance Services for the Construction of Solar Energy System for Khan Younis Waste Water Treatment Plant (KY WWTP)

RFP No.: PAL- 000093741

Drawing Title: Generators Building Floor & Roof Layouts

Design	EMCC
Checked	EMCC
Drawing NO.	GR 13
Scale:	1:100
Date:	Jan. 2021

General Notes:

ALL DIMENSIONS ARE IN (mm) UNLESS OTHERWISE MENTIONED.

CONCRETE GRADE

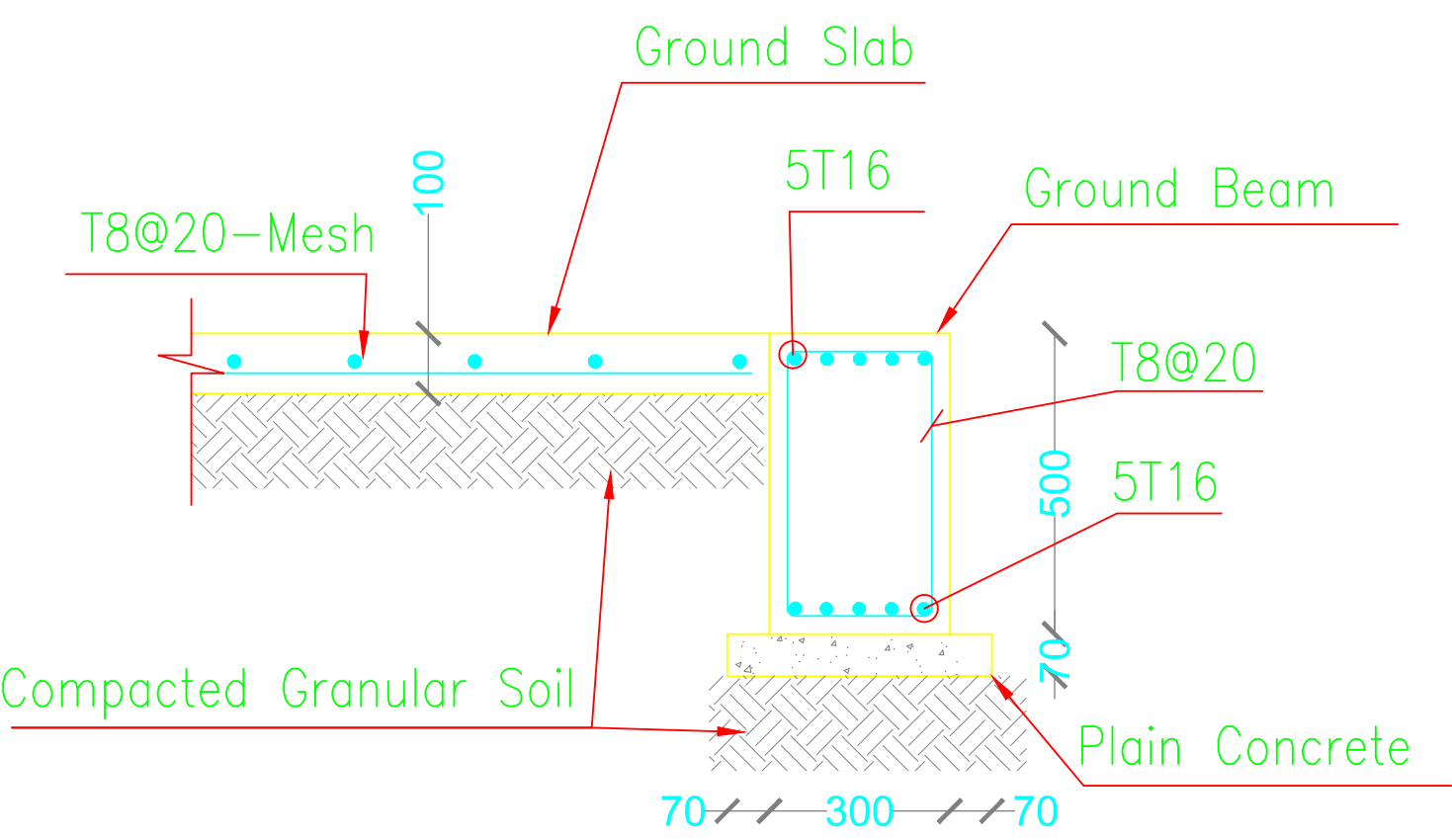
ITEM	CLASS	CUBE STRENGTH 28D
1-PLAIN CONCRETE	B200	230 kg/cm2
2-OTHERS	B250	288 kg/cm2
3-COLUMNS	B300	345 kg/cm2

CONCRETE COVER

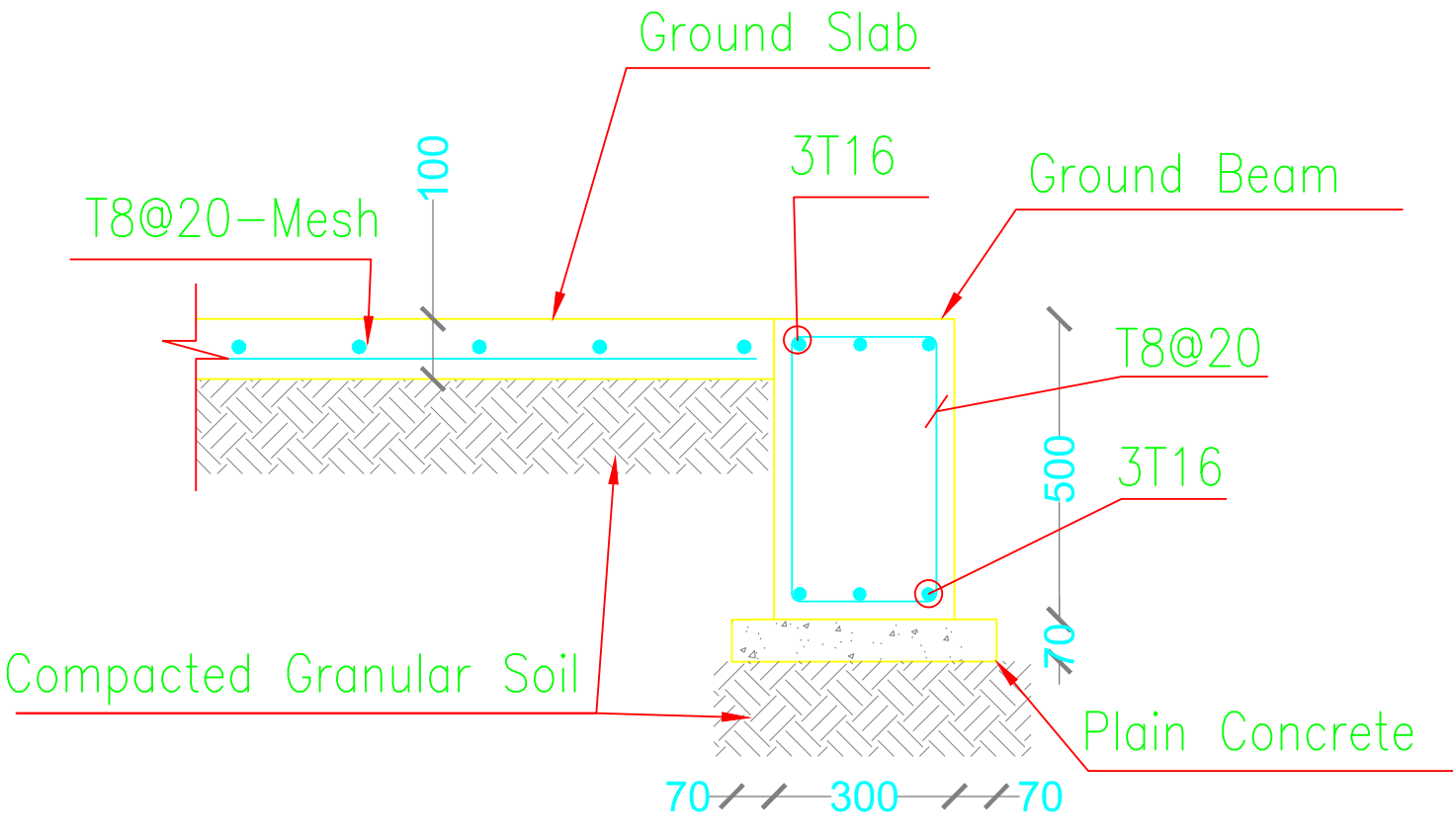
- 1- 70mm IN FOUNDATIONS
- 1- 40mm IN COLUMNS
- 2- 30mm SLABS

CONCRETE PROTECTION

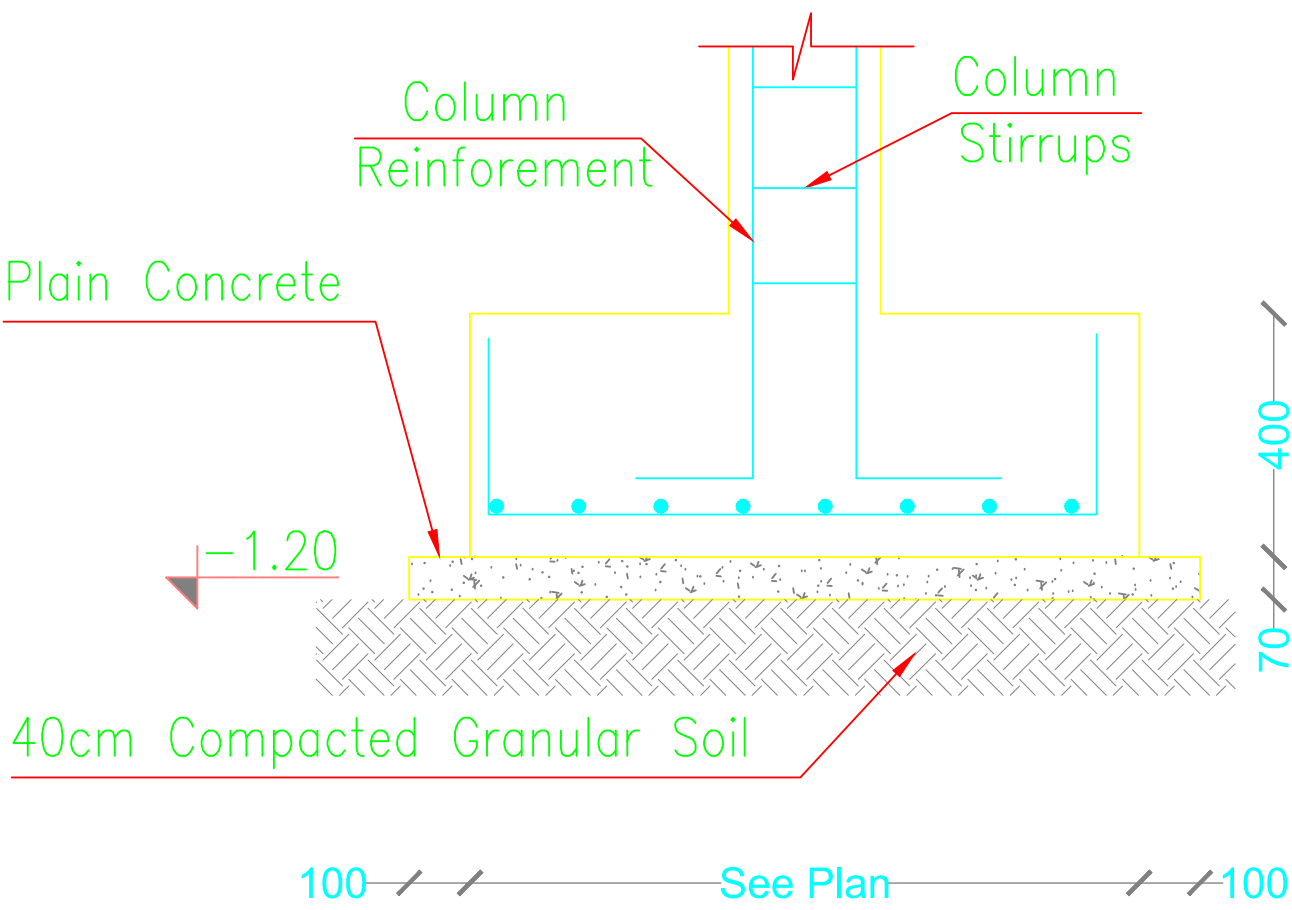
- 1-CONCRETE UP TO PLINTH LEVEL MUST BE COATED WITH TWO COATS OF HOT BITUMEN.



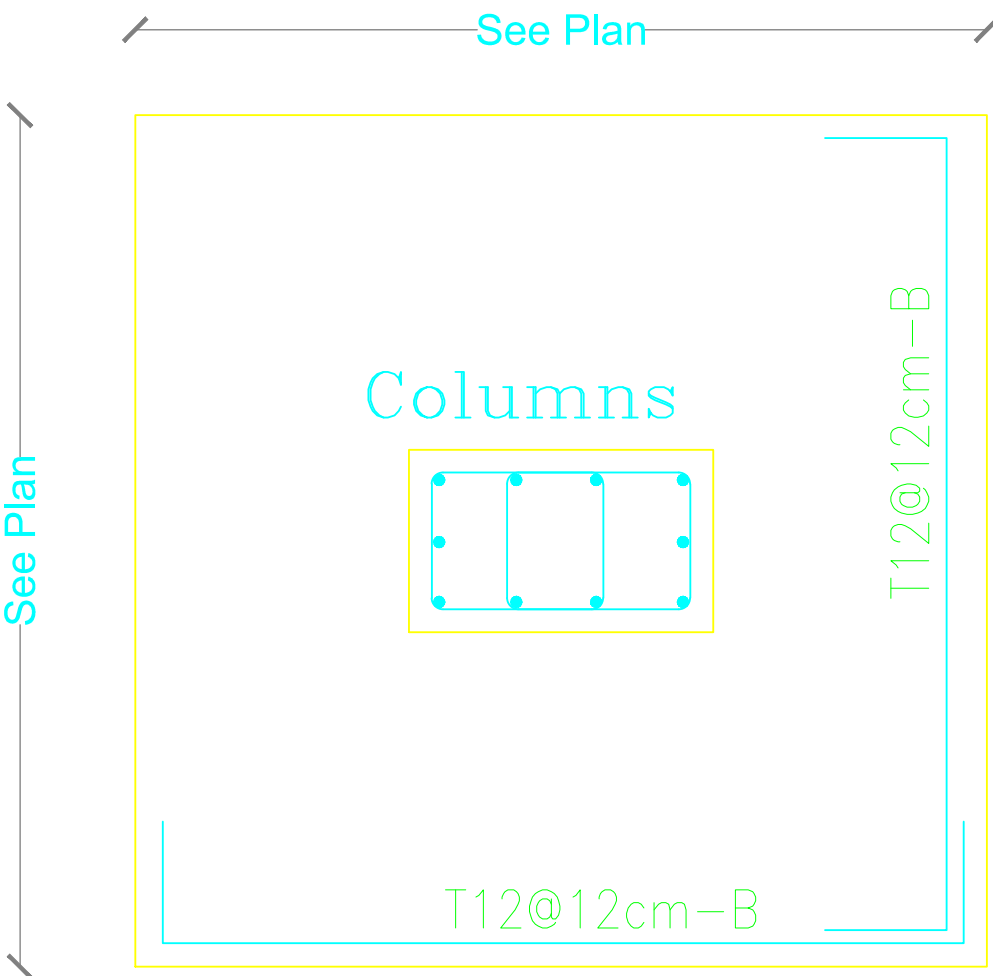
G.B-1 Details
SCALE 1:25



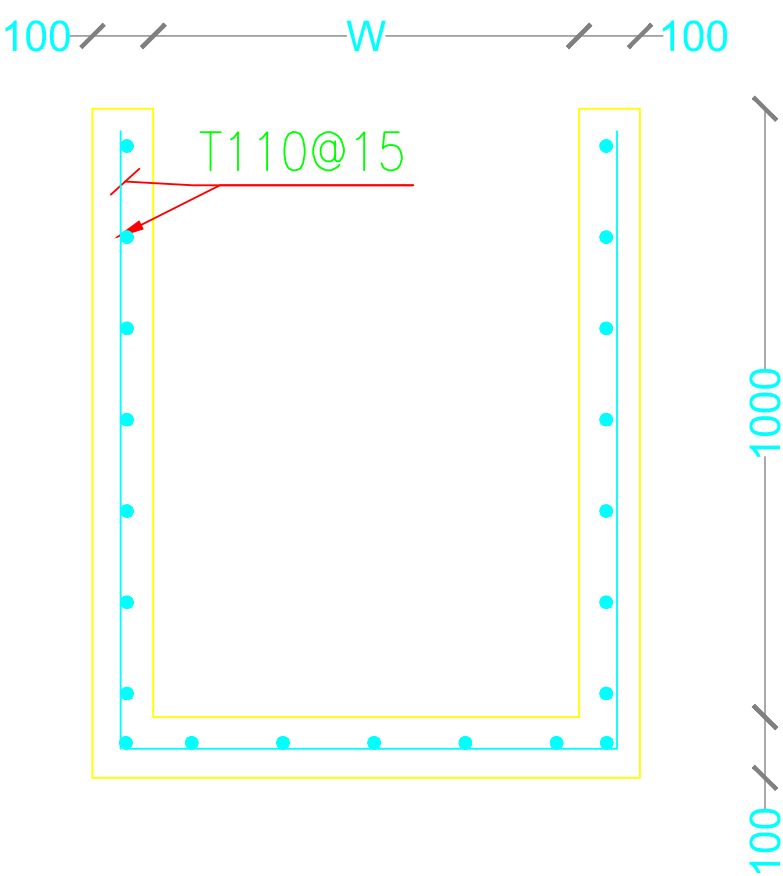
G.B-2 Details
SCALE 1:25



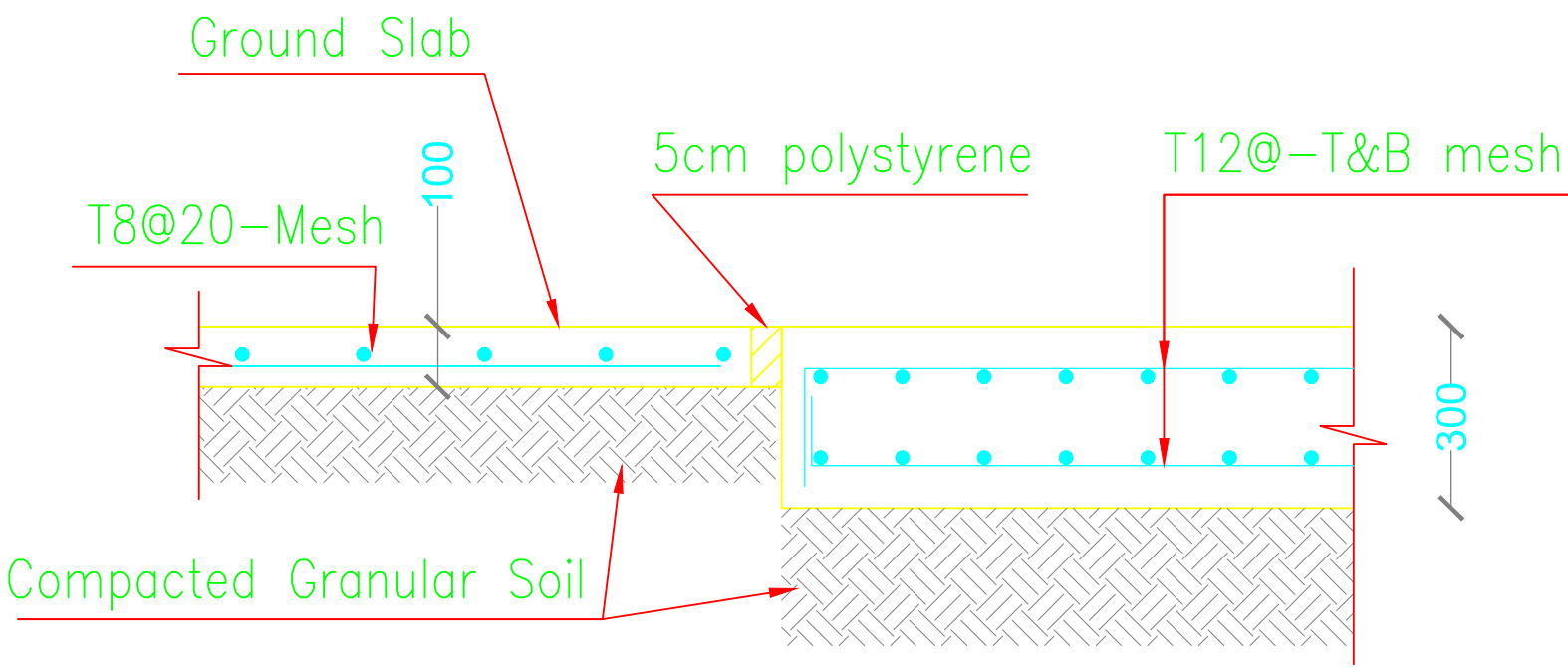
Typical Footing Details
SCALE 1:25



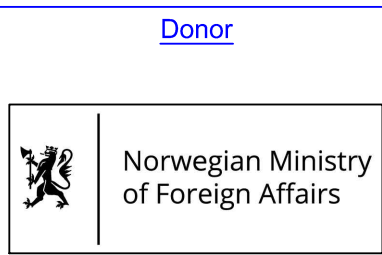
Footing F1 Details
SCALE 1:25



Typical Trenches Details
1:25



Generator Base Details
SCALE 1:25



Client



CONSULTANT



Project Name:
Provision of Detailed Design and Technical Assistance Services for the Construction of Solar Energy System for Khan Younis Waste Water Treatment Plant (KY WWTP)

RFP No.:
PAL- 0000093741

Drawing Title: Generators Building
STR Details-1

Design EMCC

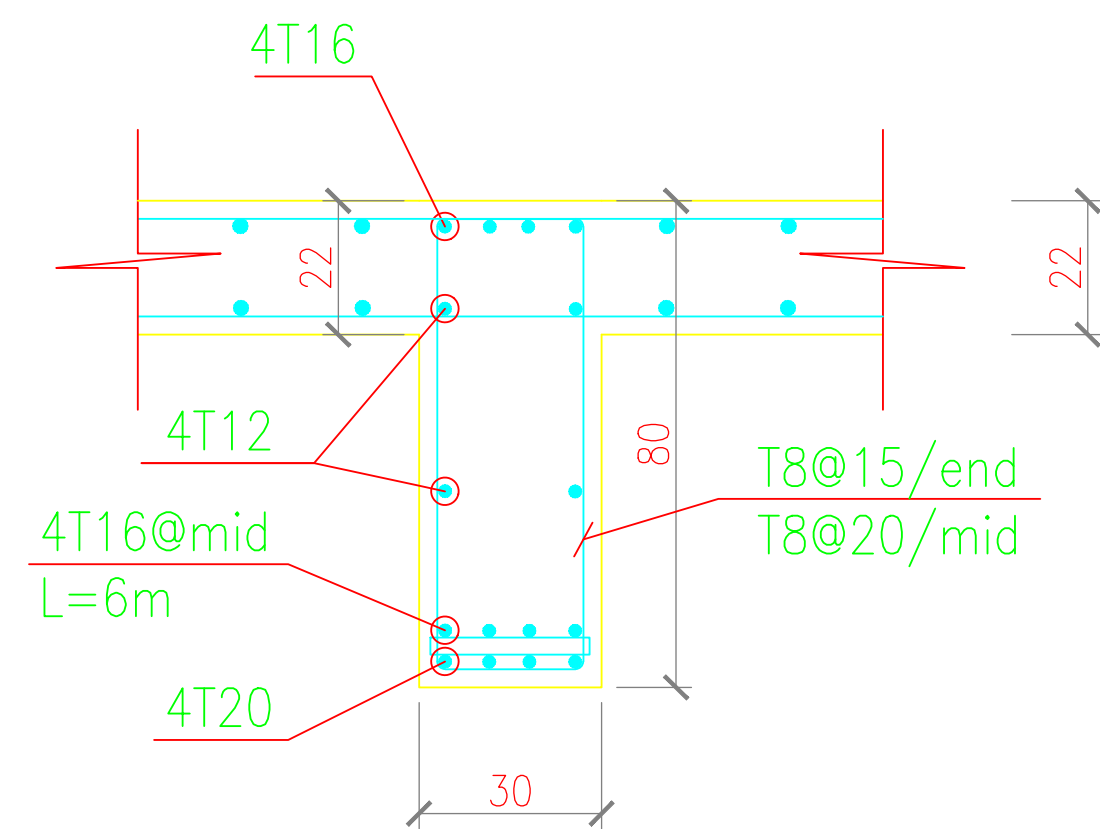
Checked EMCC

Drawing NO: GR 14

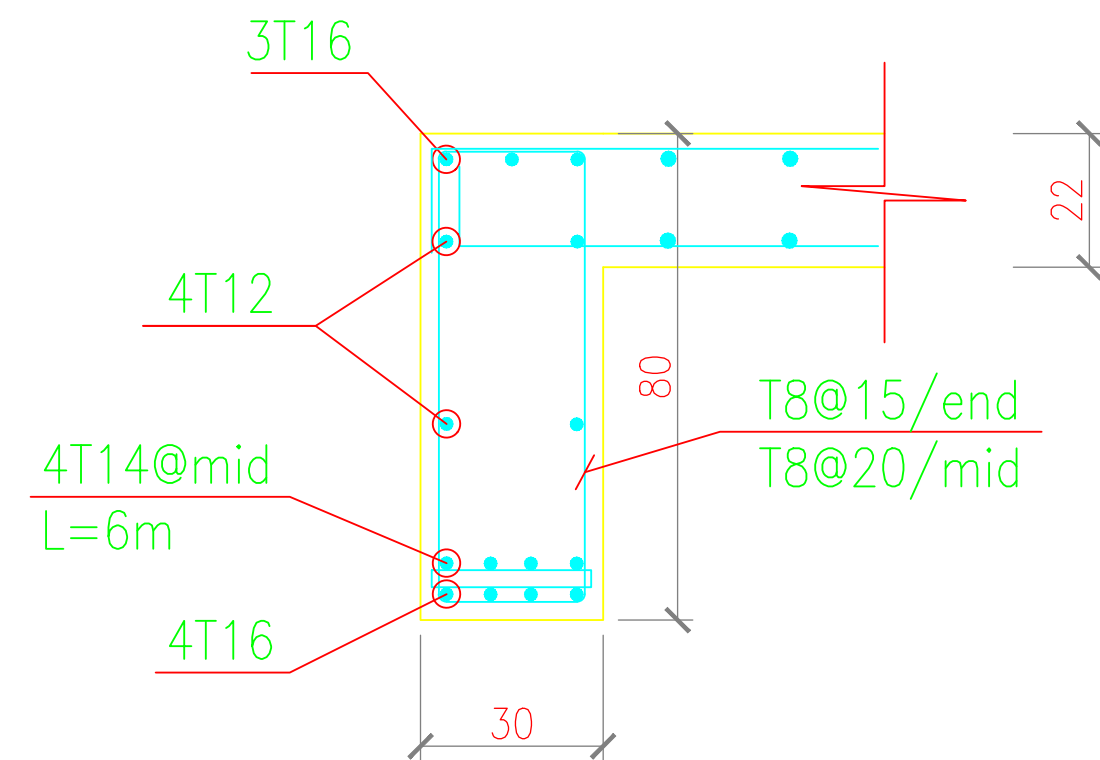
Scale: 1:100

Date: Jan. 2021

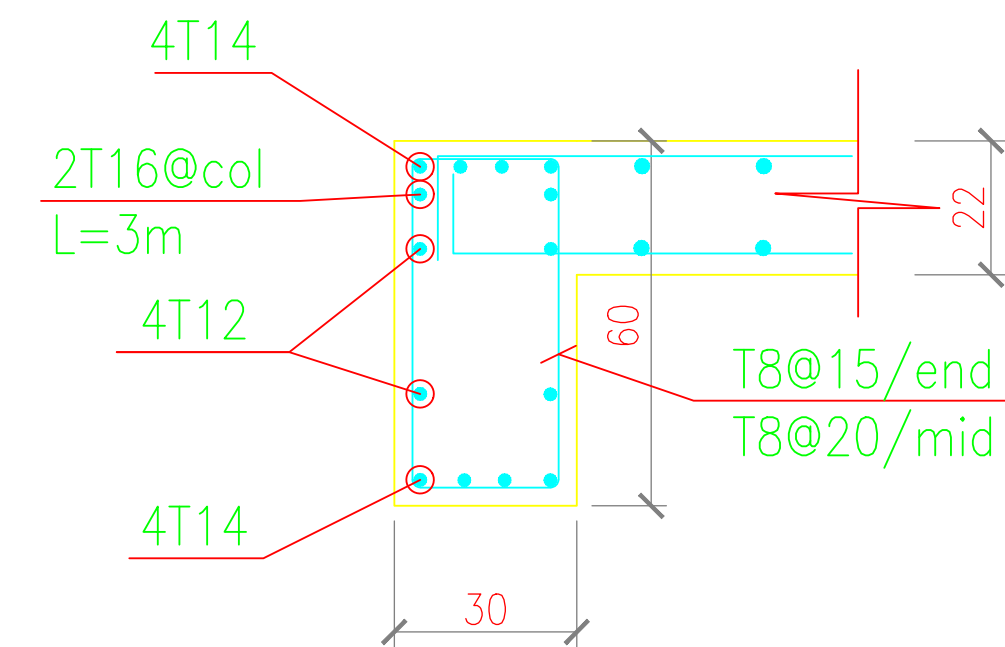
- ROOF SLAB NOTES:—
- 1—Solid Slab Thickness TH=22cm as mentioned on plan.
 - 2—Mesh T12@20 cm bottom both ways.
Mesh T12@20 cm top both ways.
 - 3—Only extra reinforcement are shown on plan.
 - 4—Provide 4T16 top & bot around all openings.
 - 5 —Slab Boundaries to be Confirmed from Arch. drg.



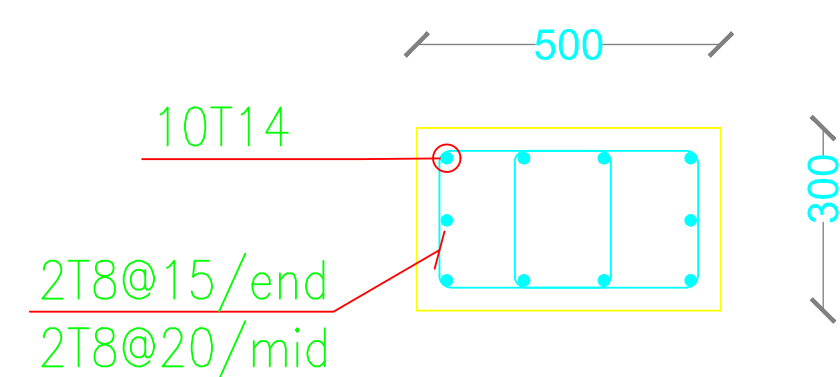
Beam-1
1:25



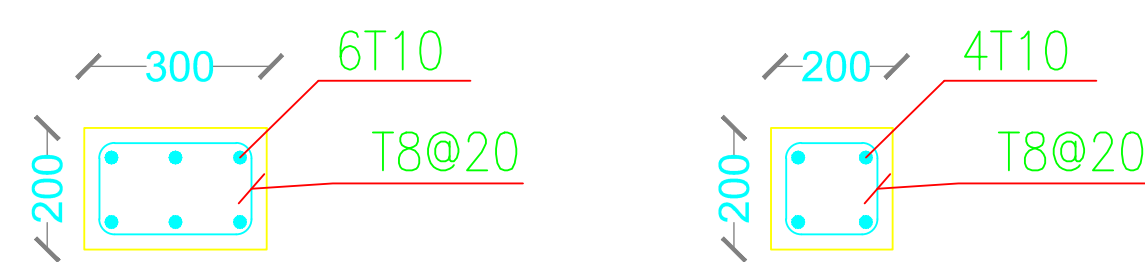
Beam-2
1:25



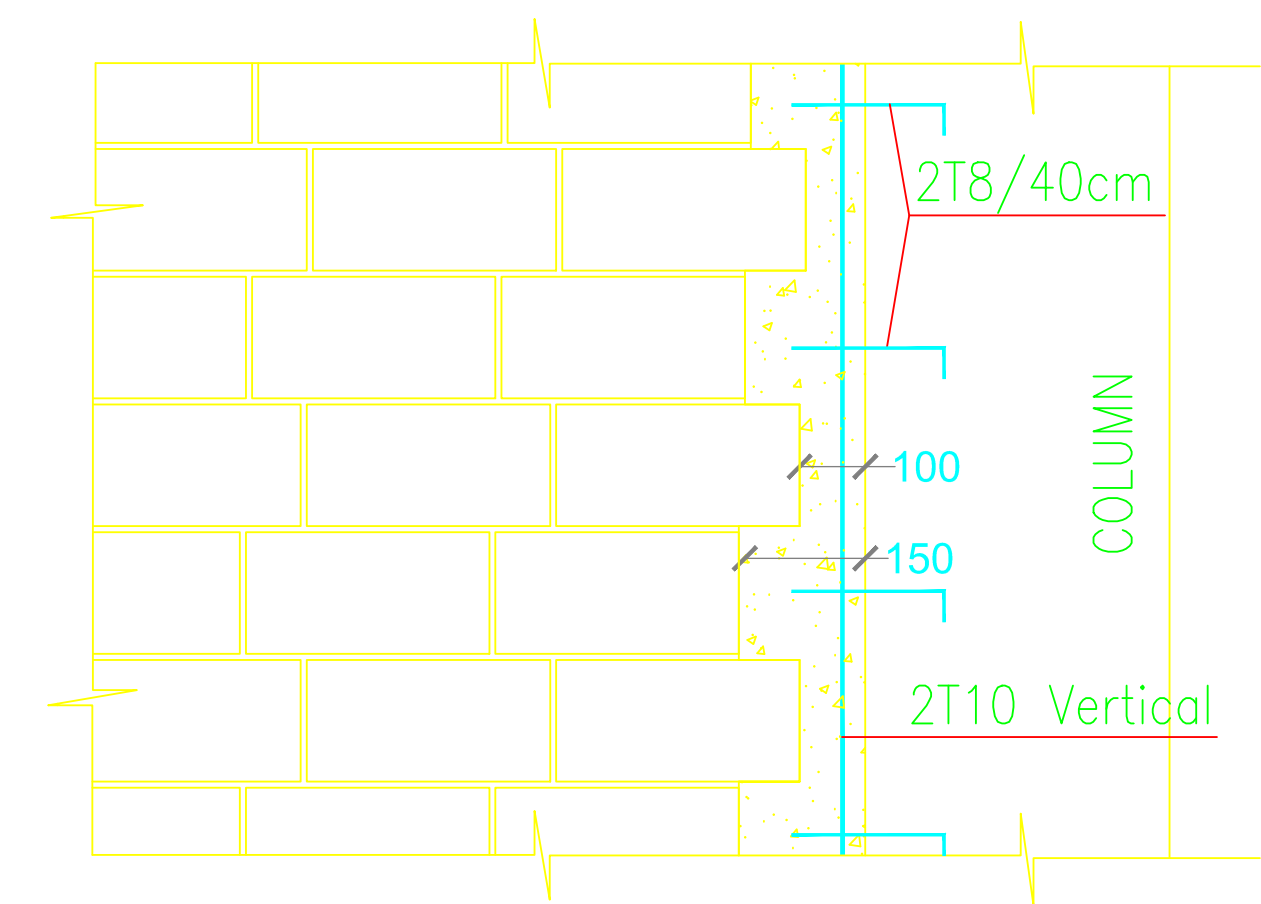
Beam-3
1:25



Columns Details
1:25



Typical Lintels&sills Details
1:25



POST COLUMN DETAILS
1:25

Donor

Norwegian Ministry of Foreign Affairs

Client

UNDP

CONSULTANT

EMCC

Project Name:

Provision of Detailed Design and Technical Assistance Services for the Construction of Solar Energy System for Khan Younis Waste Water Treatment Plant (KY WWTP)

RFP No.:

PAL- 0000093741

Drawing Title:

Generators Building STR Details-2

Design

EMCC

Checked

EMCC

Drawing NO.

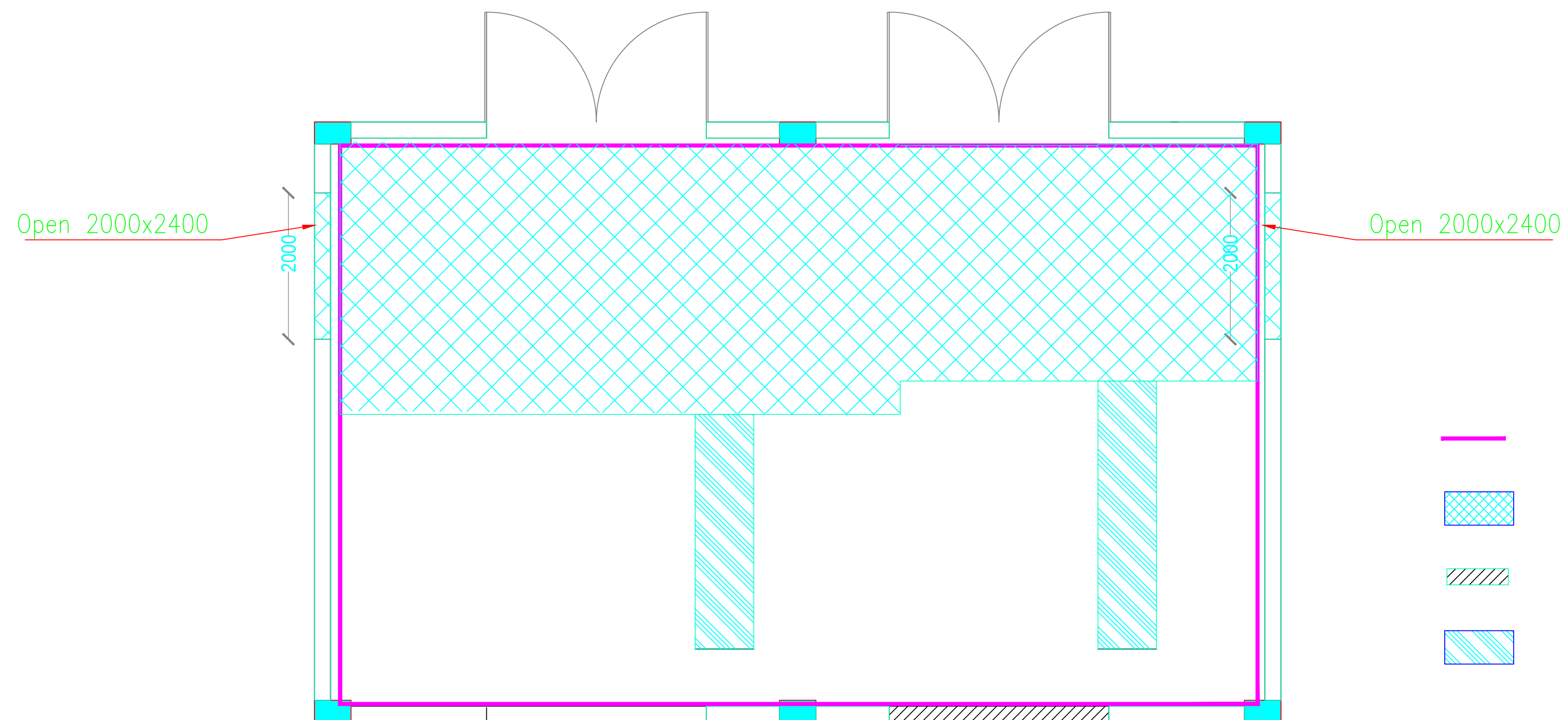
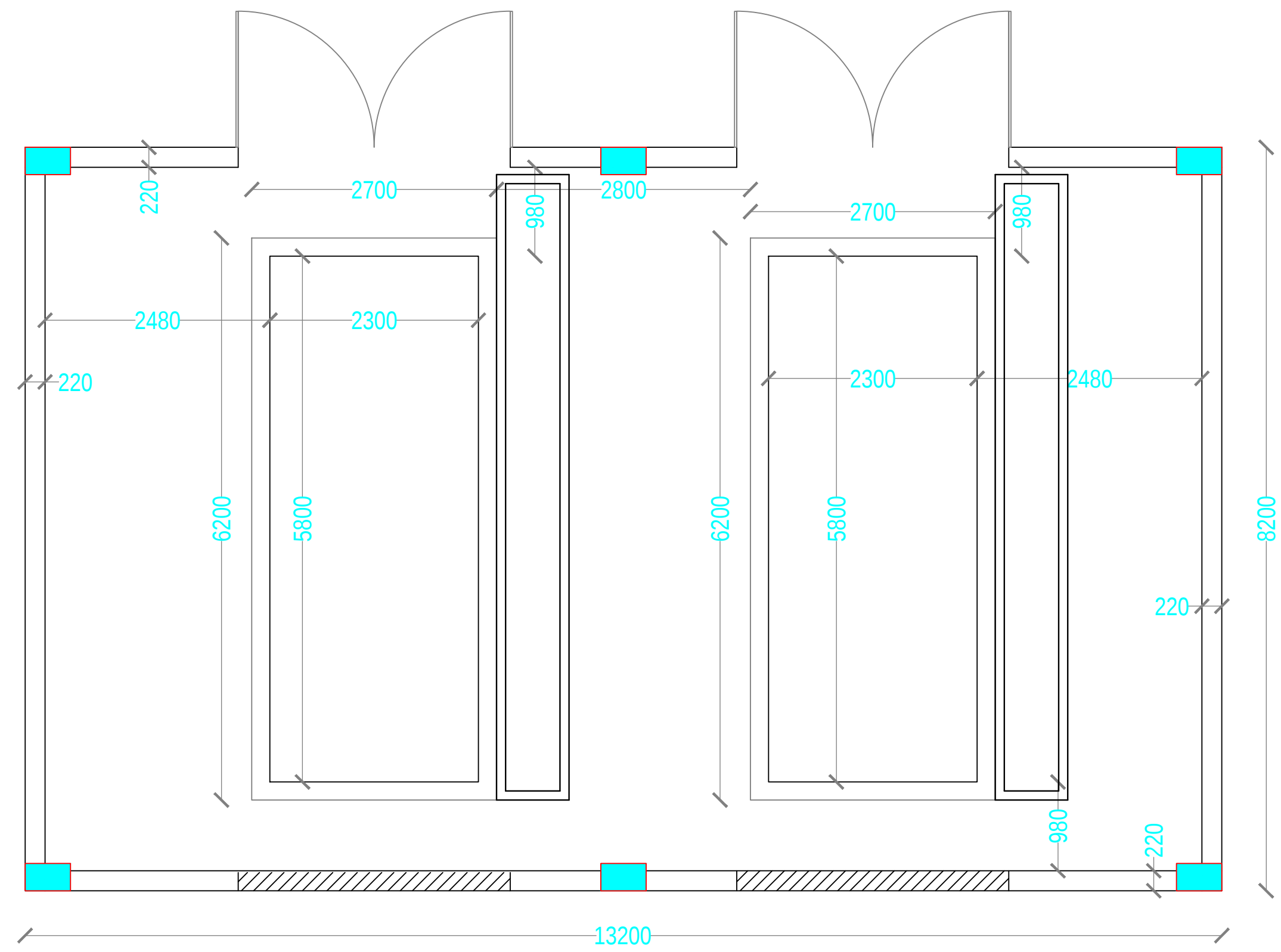
GR 15

Scale:

1:100

Date:

Jan. 2021



Notes:

Donor

 Norwegian Ministry of Foreign Affairs

Client



CONSULTANT



Project Name:

Provision of Detailed Design and Technical Assistance Services for the Construction of Solar Energy System for Khan Younis Waste Water Treatment Plant (KY WWTP)

RFP No. : PAL- 0000093741

Drawing Title: Transformers Building
Existing & demolish plan

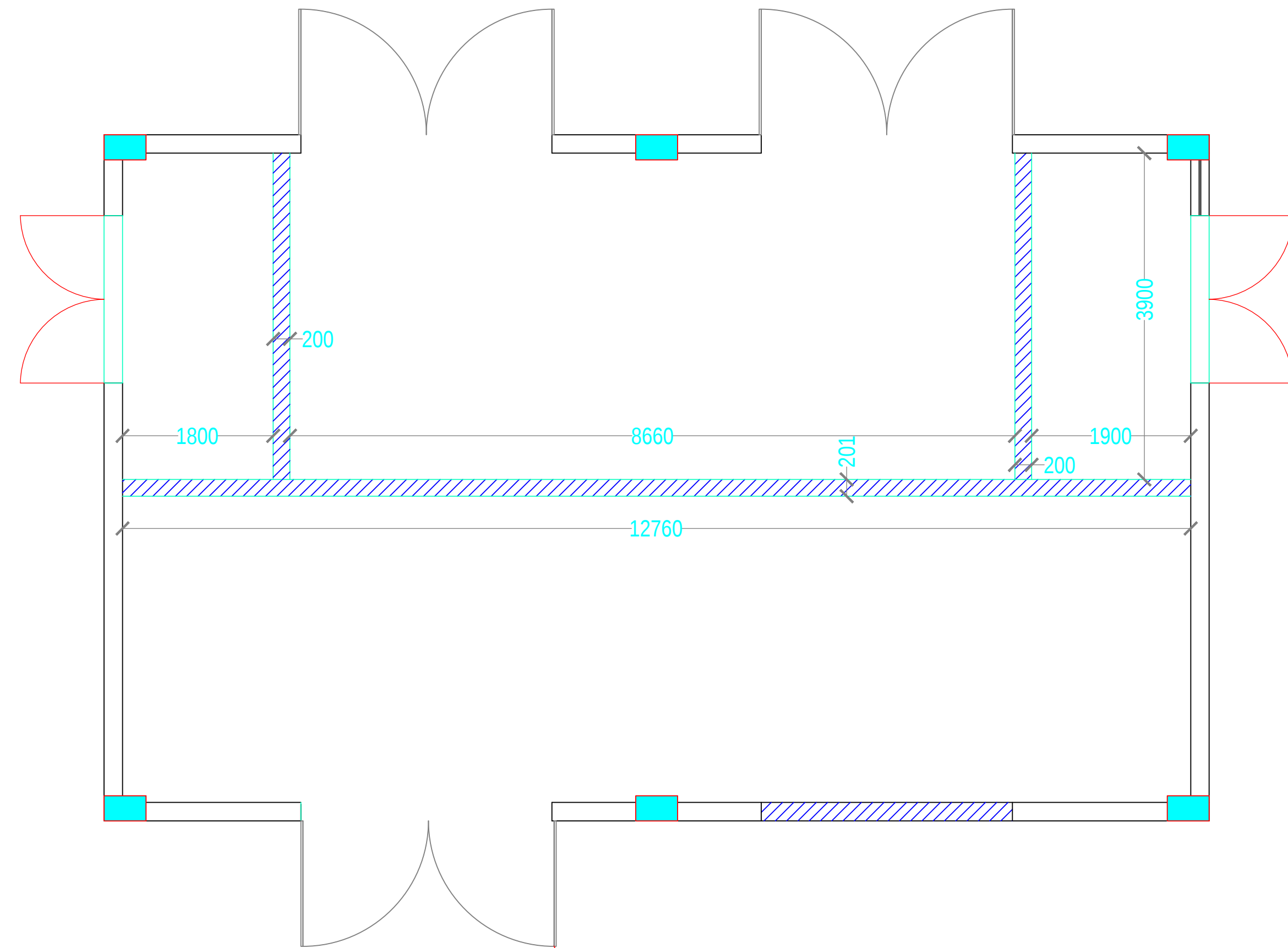
Design EMCC

Checked EMCC

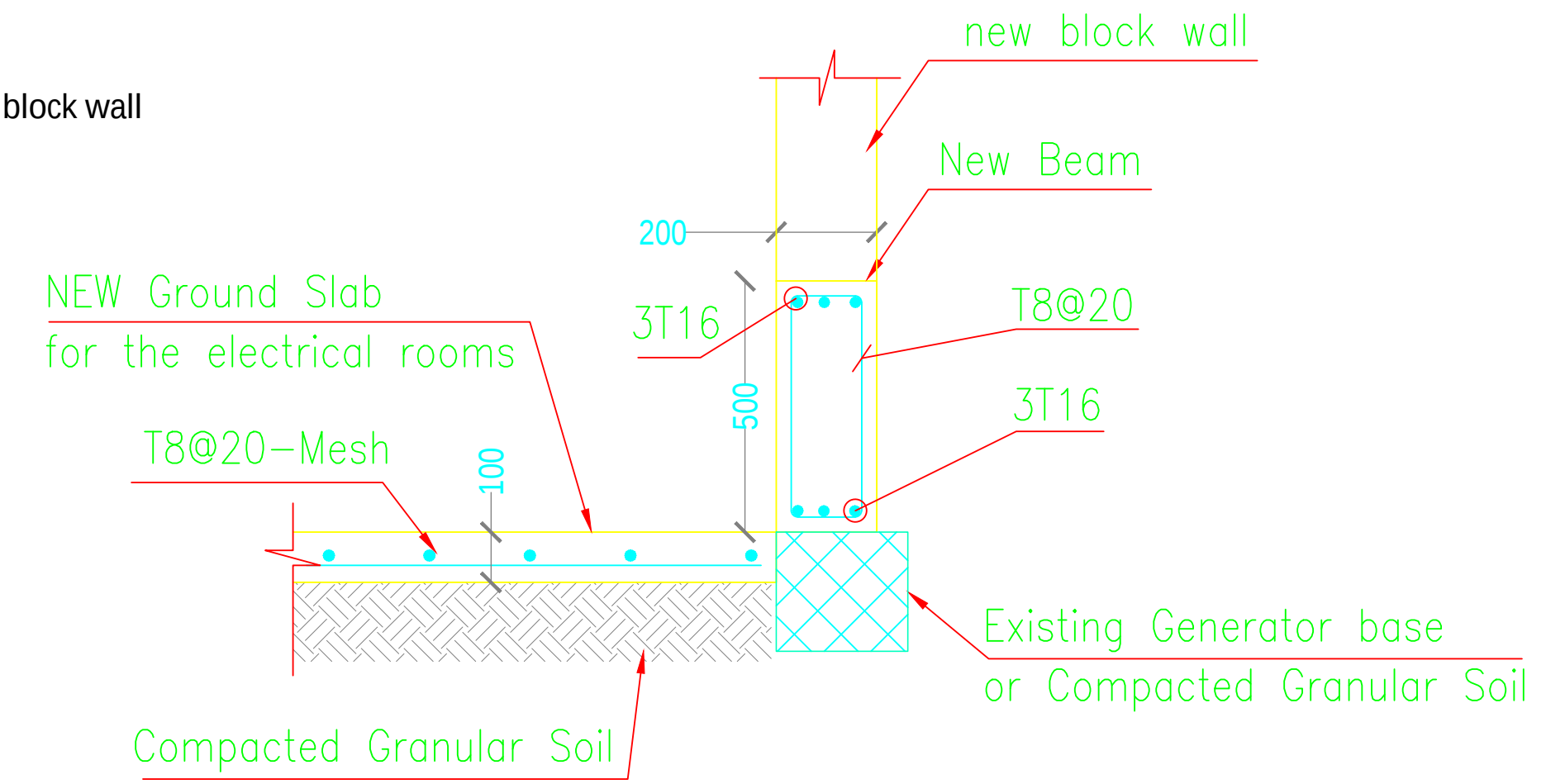
Drawing NO. TRF -01

Scale: 1 : 100

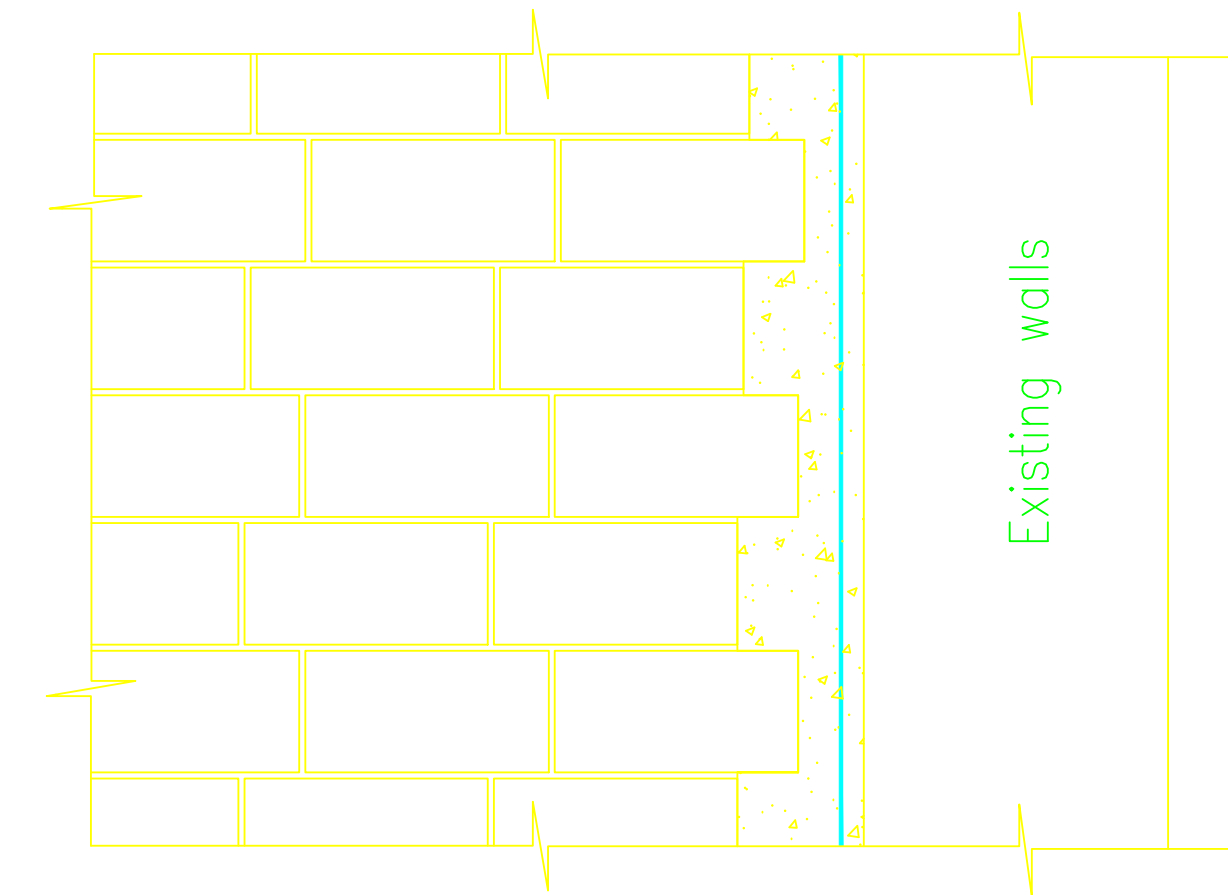
Date: JAN. 2021



new block wall

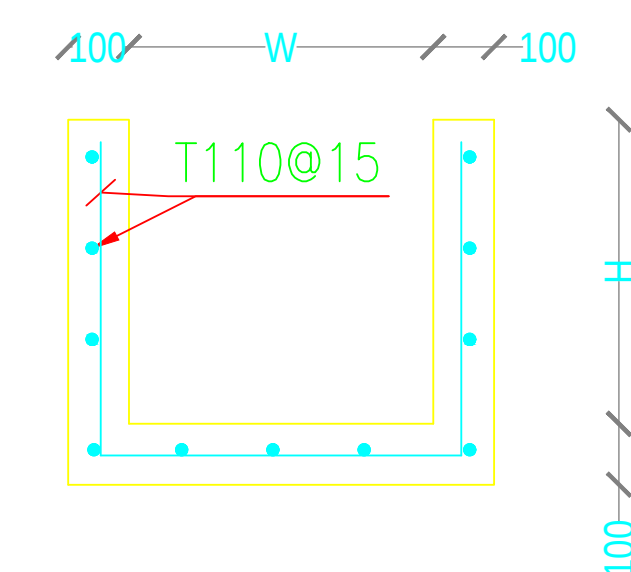


Typical Details
SCALE 1:25



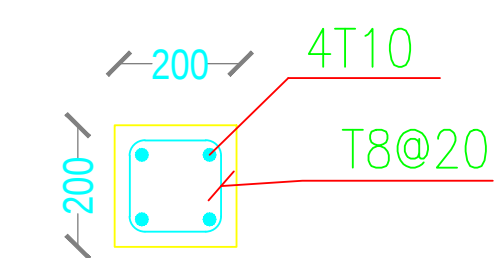
POST COLUMN DETAILS

1:25



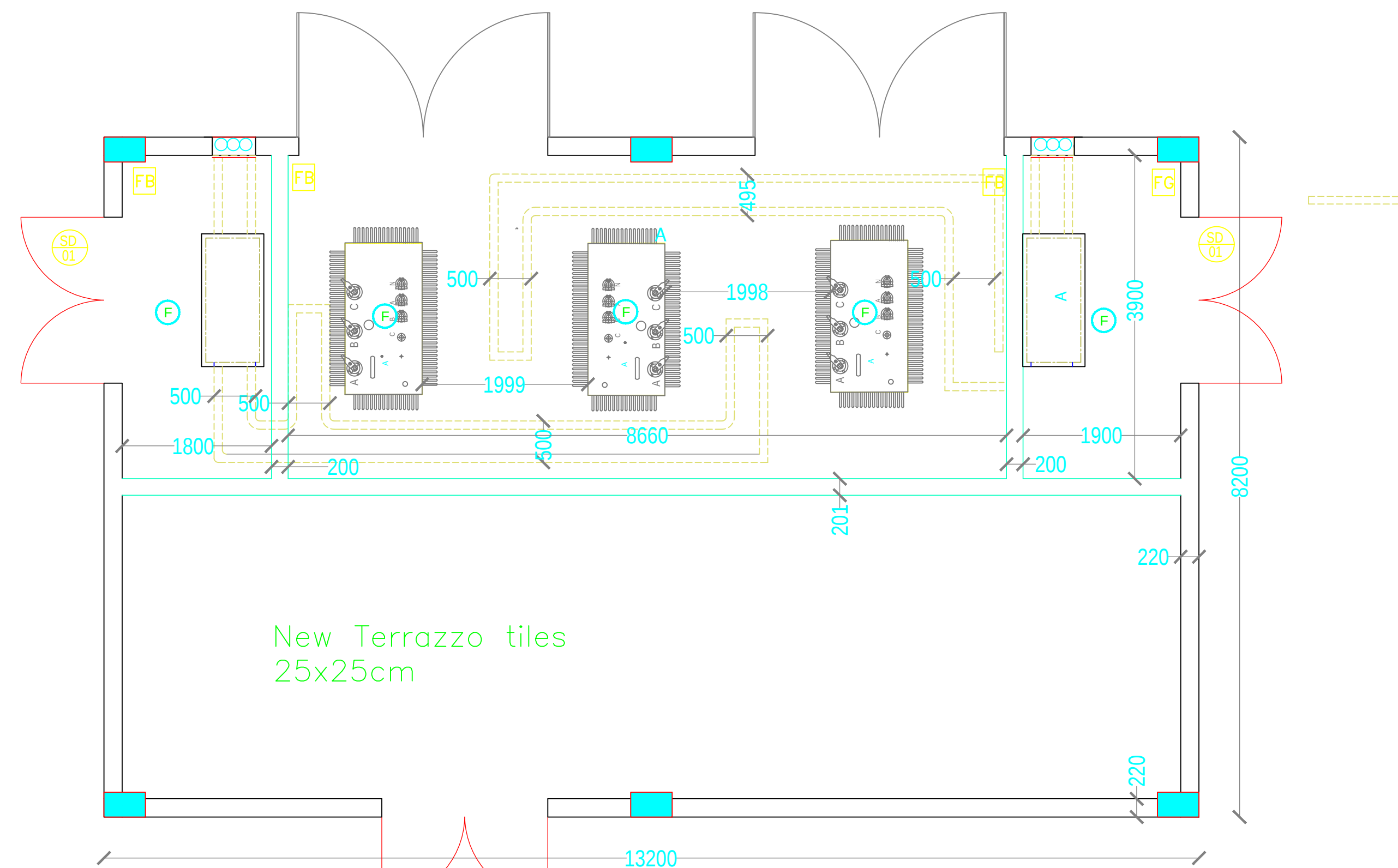
Typical Trenches Details

1:25



Typical sills Details

1:25



new 2mm Galvanized steel sheet to
cover the leaves of the existing door

New Terrazzo tiles
25x25cm

new 2mm Galvanized steel sheet to
cover the leaves of the existing door

Notes:

- Auto Fire Extinguisher 2.5kg (F)
- (5kg) powder fire extinguisher (FB)
- (6kg) (BCF) gas fire extinguisher (FG)

Donor



Client



CONSULTANT



Project Name:
Provision of Detailed Design and Technical
Assistance Services for the Construction of
Solar Energy System for Khan Younis Waste
Water Treatment Plant (KY WWTP)

RFP No.:
PAL- 0000093741

Drawing Title: Transformers Building
Partitions & Trenches

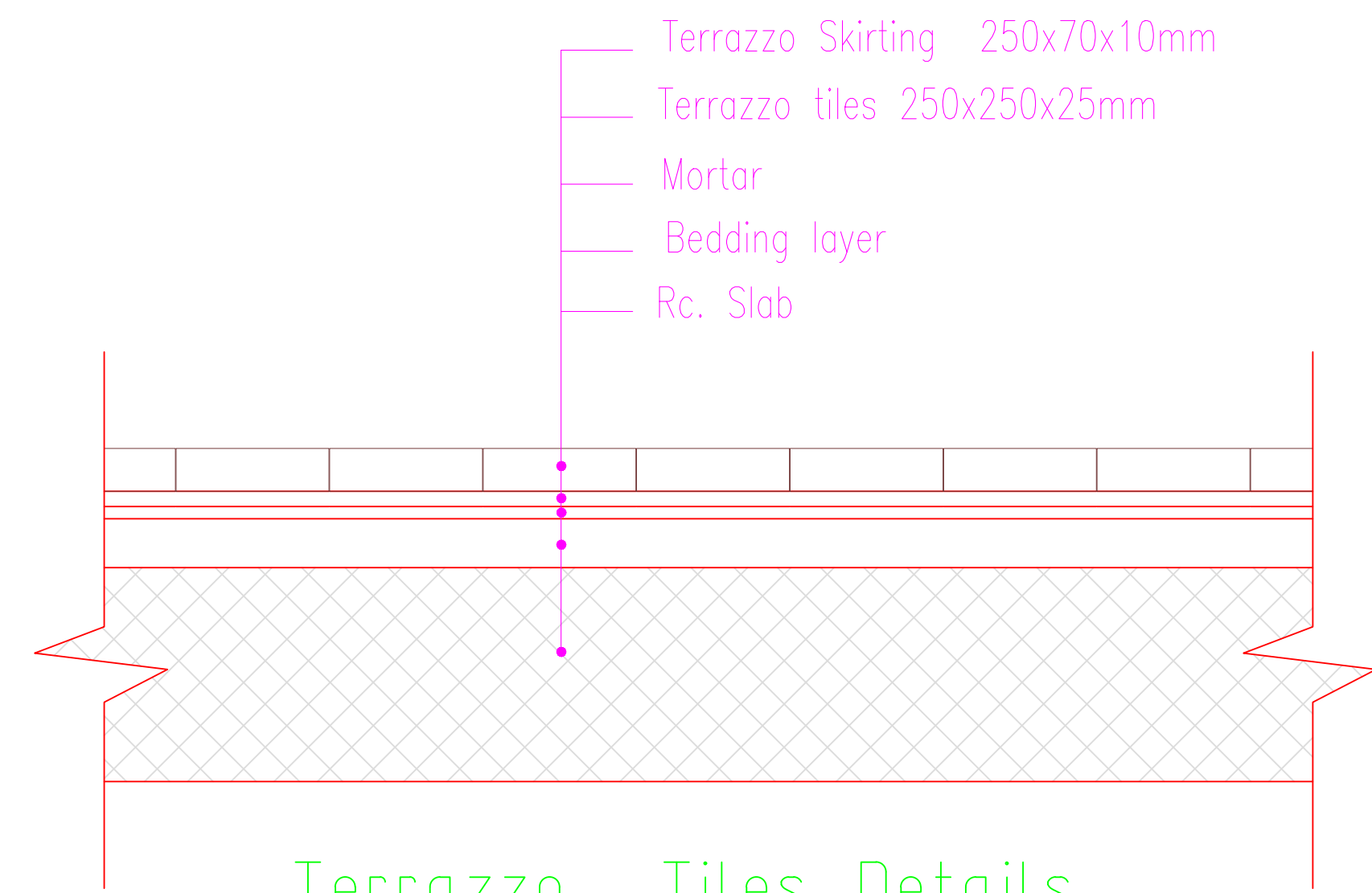
Design EMCC

Checked EMCC

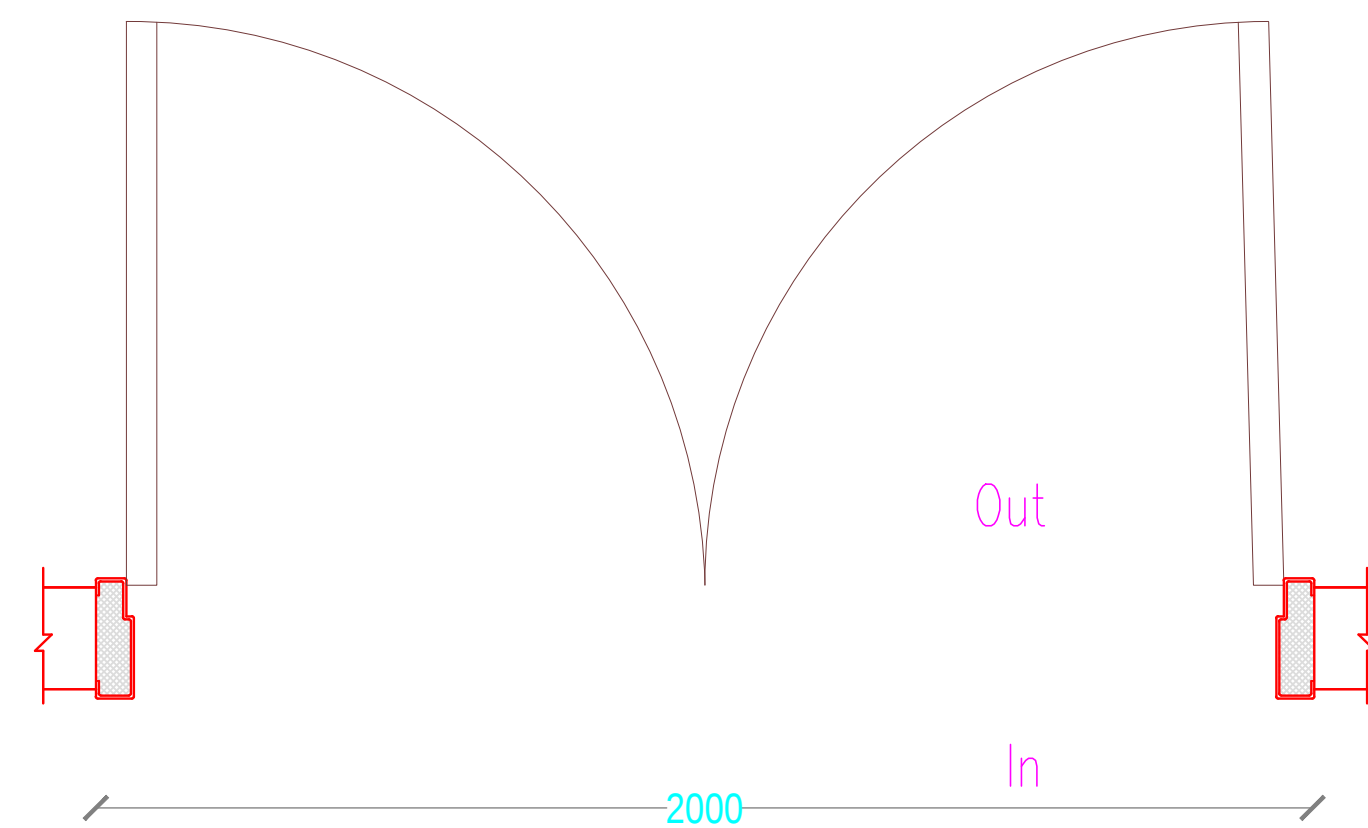
Drawing NO. TRF -02

Scale: 1 : 100

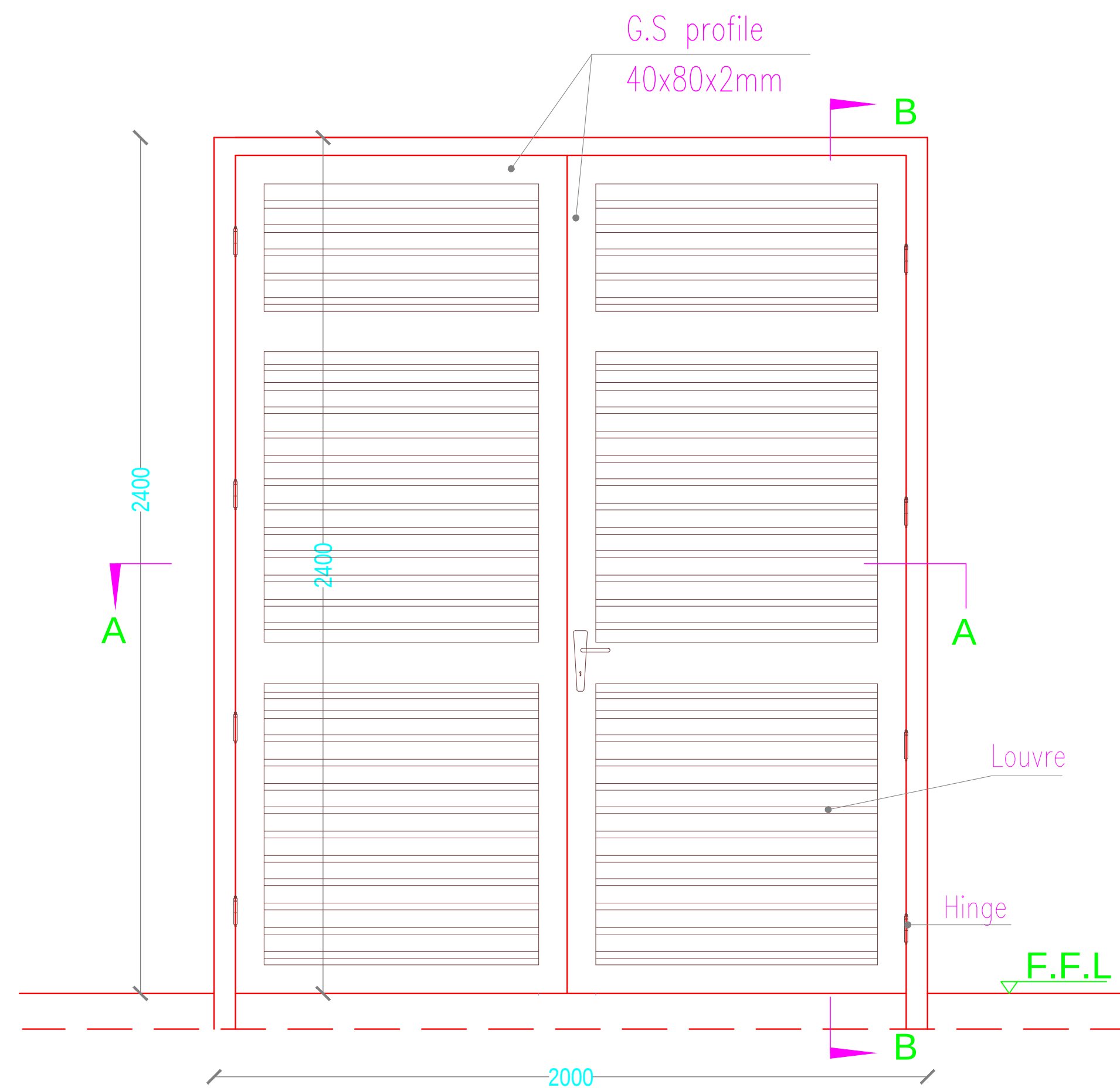
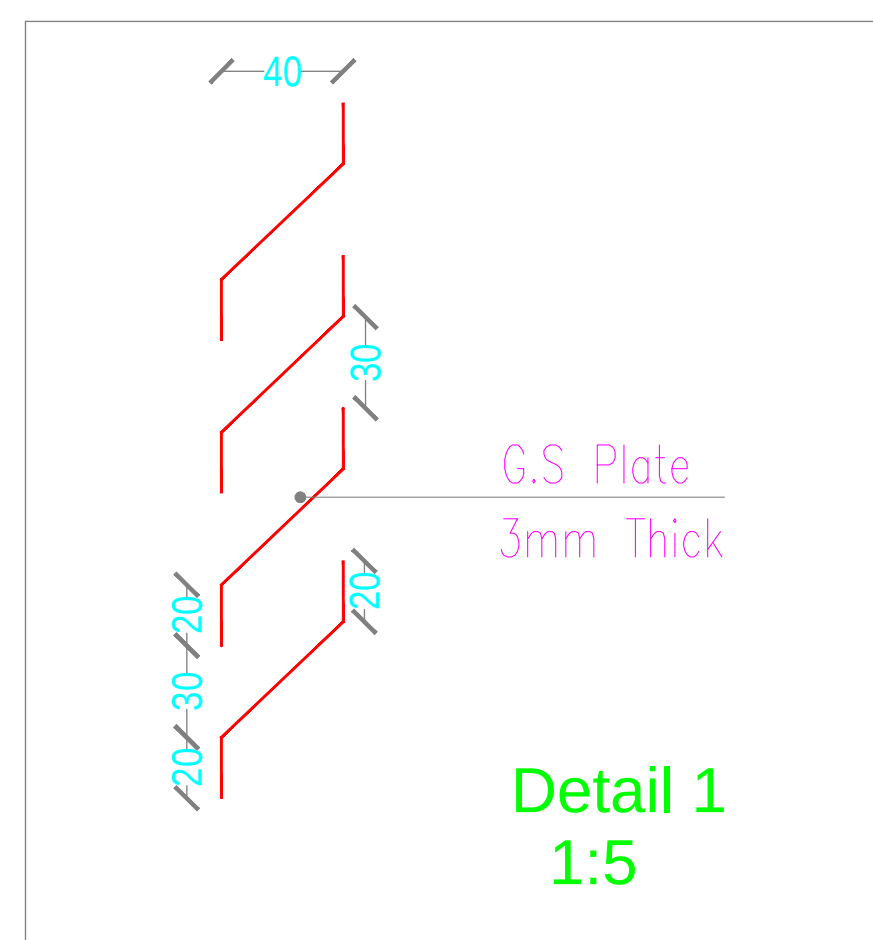
Date: JAN. 2021



Terrazzo Tiles Details
N.T.S

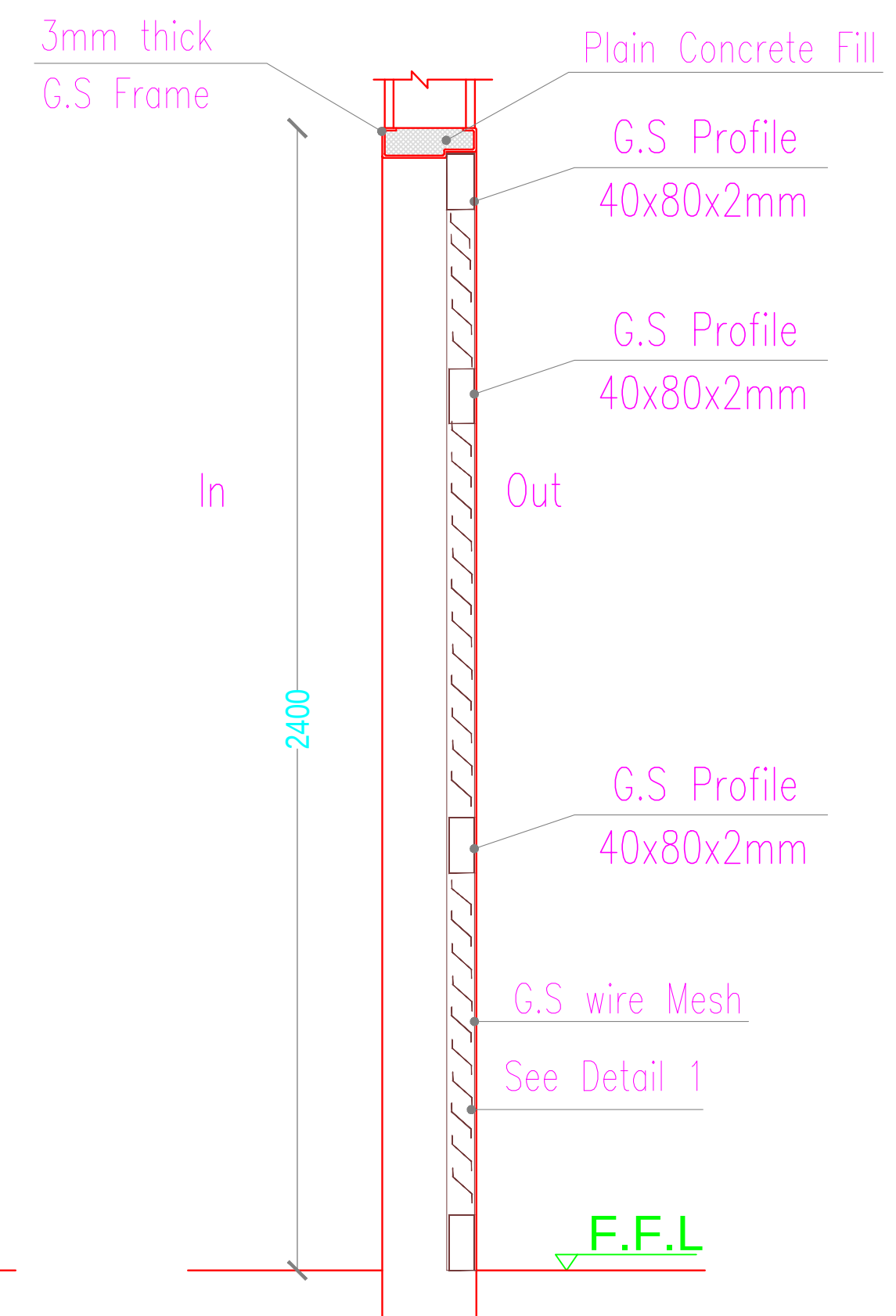


Section A-A
Scale 1:25



Elevation
Scale 1:25

STEEL DOOR (SD01)



Section B-B
Scale 1:25

Notes:

Donor

Norwegian Ministry of Foreign Affairs

Client

UNDP

CONSULTANT

EMCC

Project Name:
Provision of Detailed Design and Technical Assistance Services for the Construction of Solar Energy System for Khan Younis Waste Water Treatment Plant (KY WWTP)

RFP No.:
PAL- 000093741

Drawing Title: Transformers Building
Details

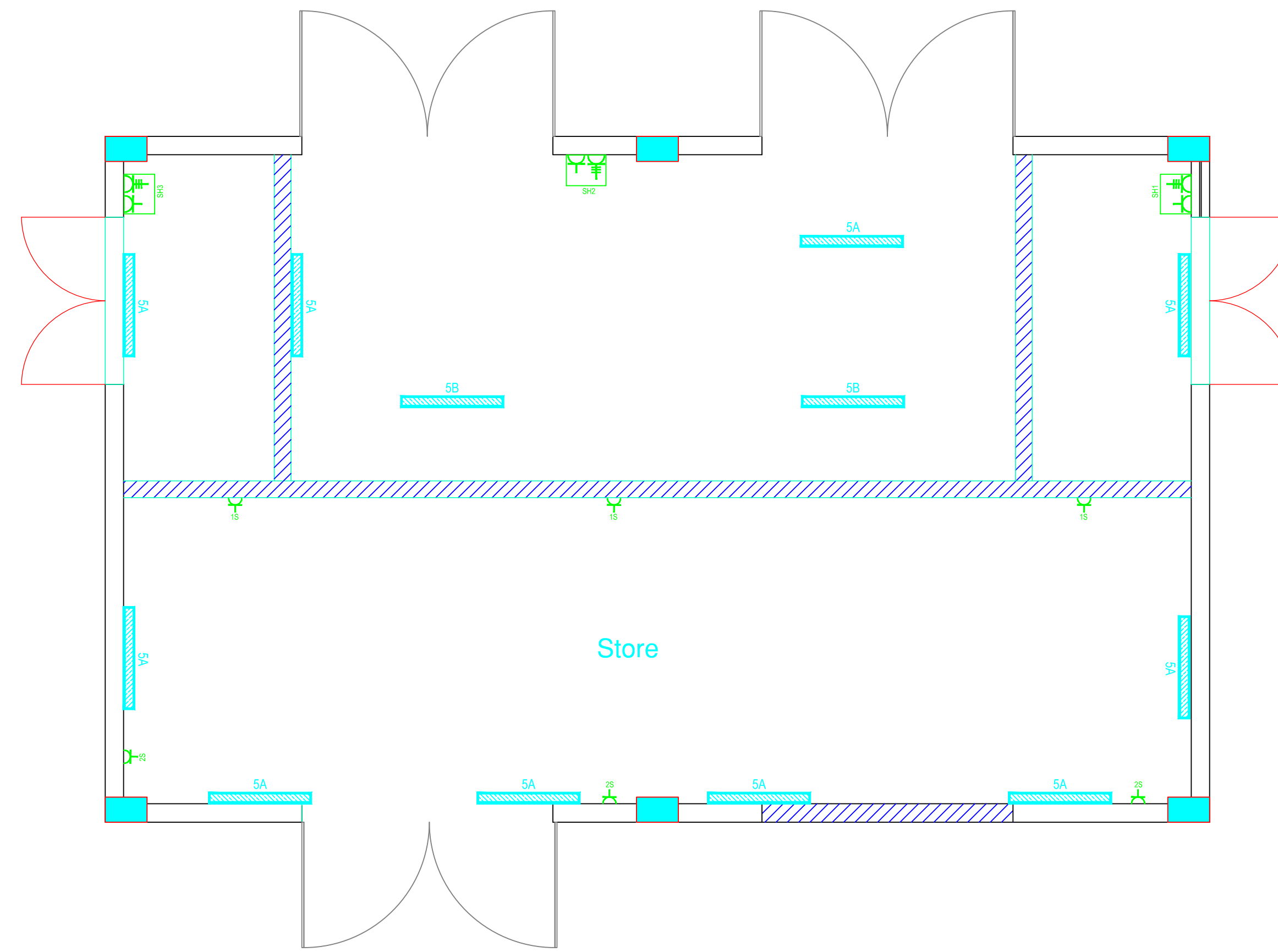
Design
EMCC

Checked
EMCC

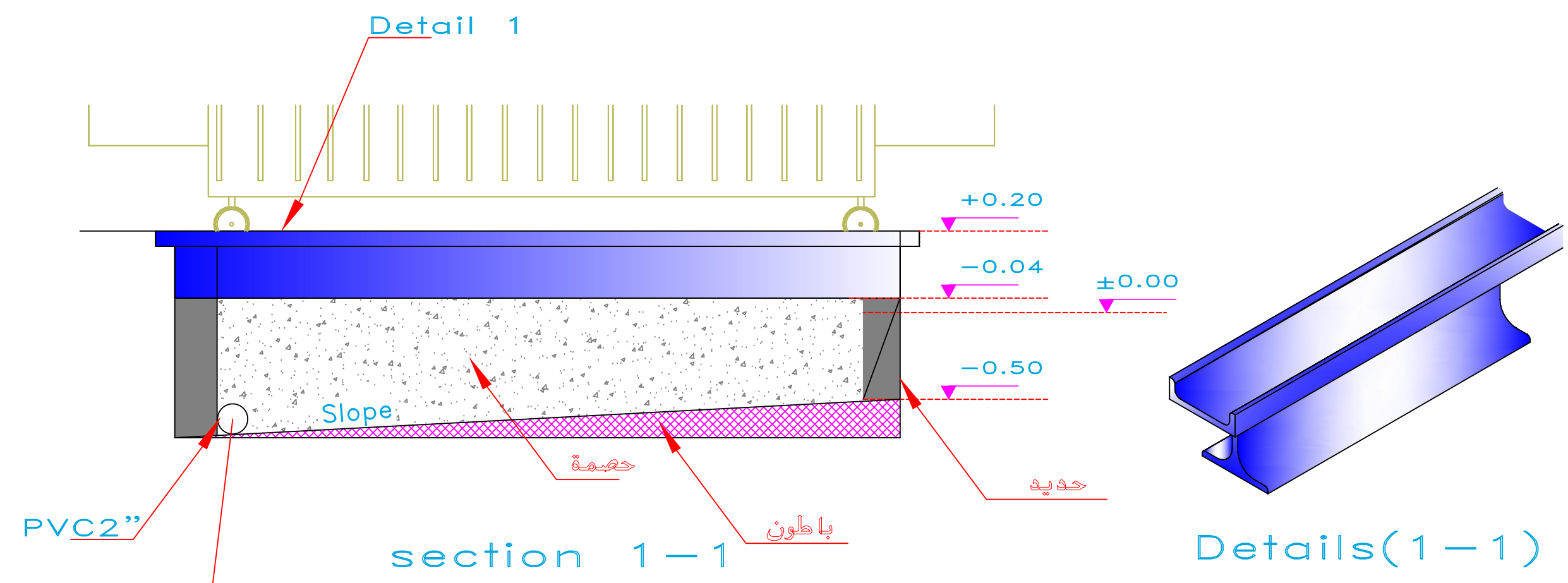
Drawing NO.
TRF -03

Scale:
1 : 100

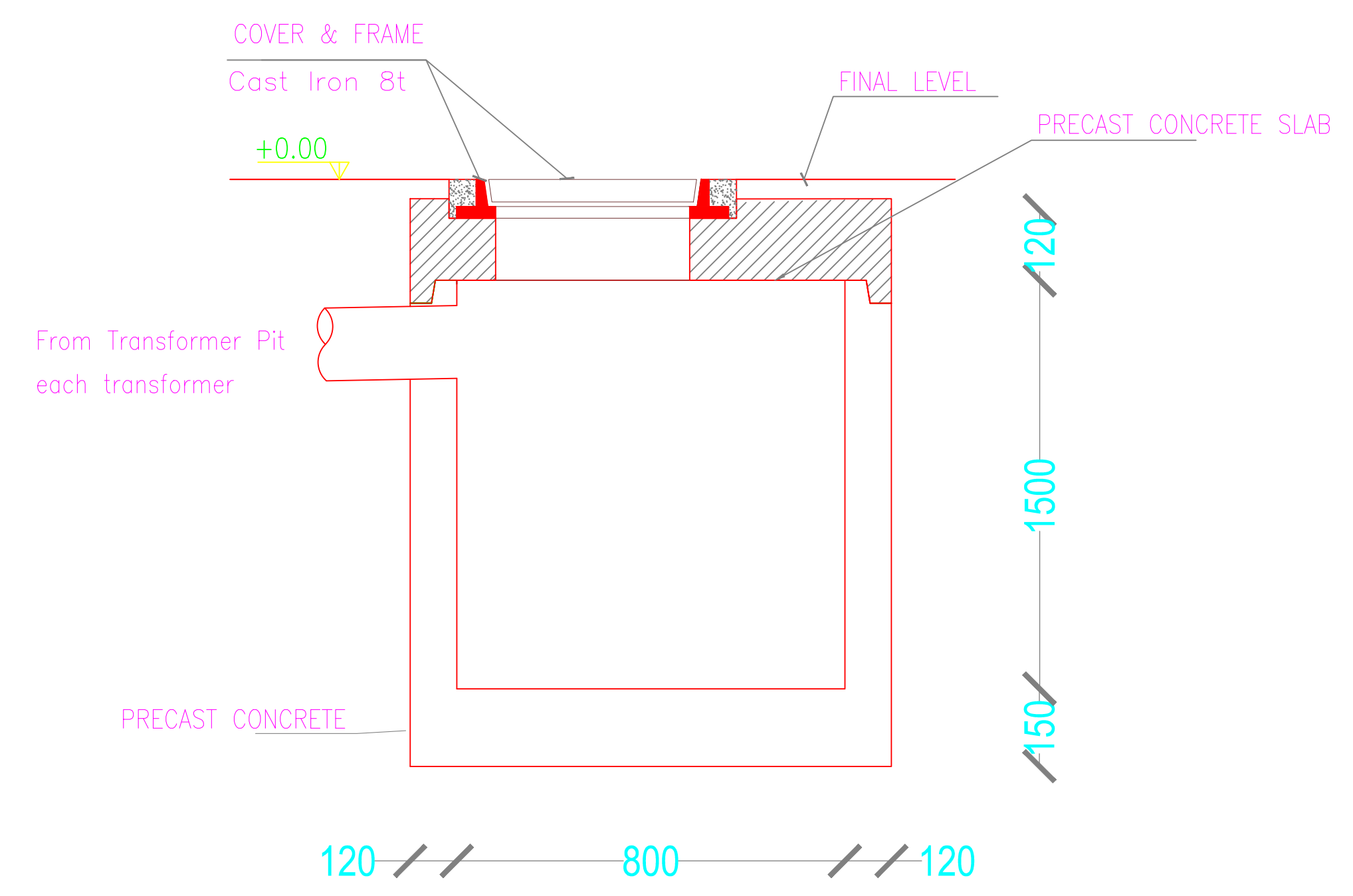
Date:
JAN. 2021



LIGHTING &POWER PLAN FOR TRF BUILDING



Work includes Supply and install precast concrete sewerage manholes B300 of 80cm internal diameter with cast iron cover of 8 tonne bearing capacity. The depth is up to and including 1.0m.



Oil Manhole/each transformer
NTS

Notes:

Donor

Norwegian Ministry of Foreign Affairs

Client

UNDP

CONSULTANT

EMCC

Project Name:
Provision of Detailed Design and Technical Assistance Services for the Construction of Solar Energy System for Khan Younis Waste Water Treatment Plant (KY WWTP)

RFP No.:
PAL- 0000093741

Drawing Title: Transformers Building
Electrical Installations

Design
EMCC

Checked
EMCC

Drawing NO.
TRF -04

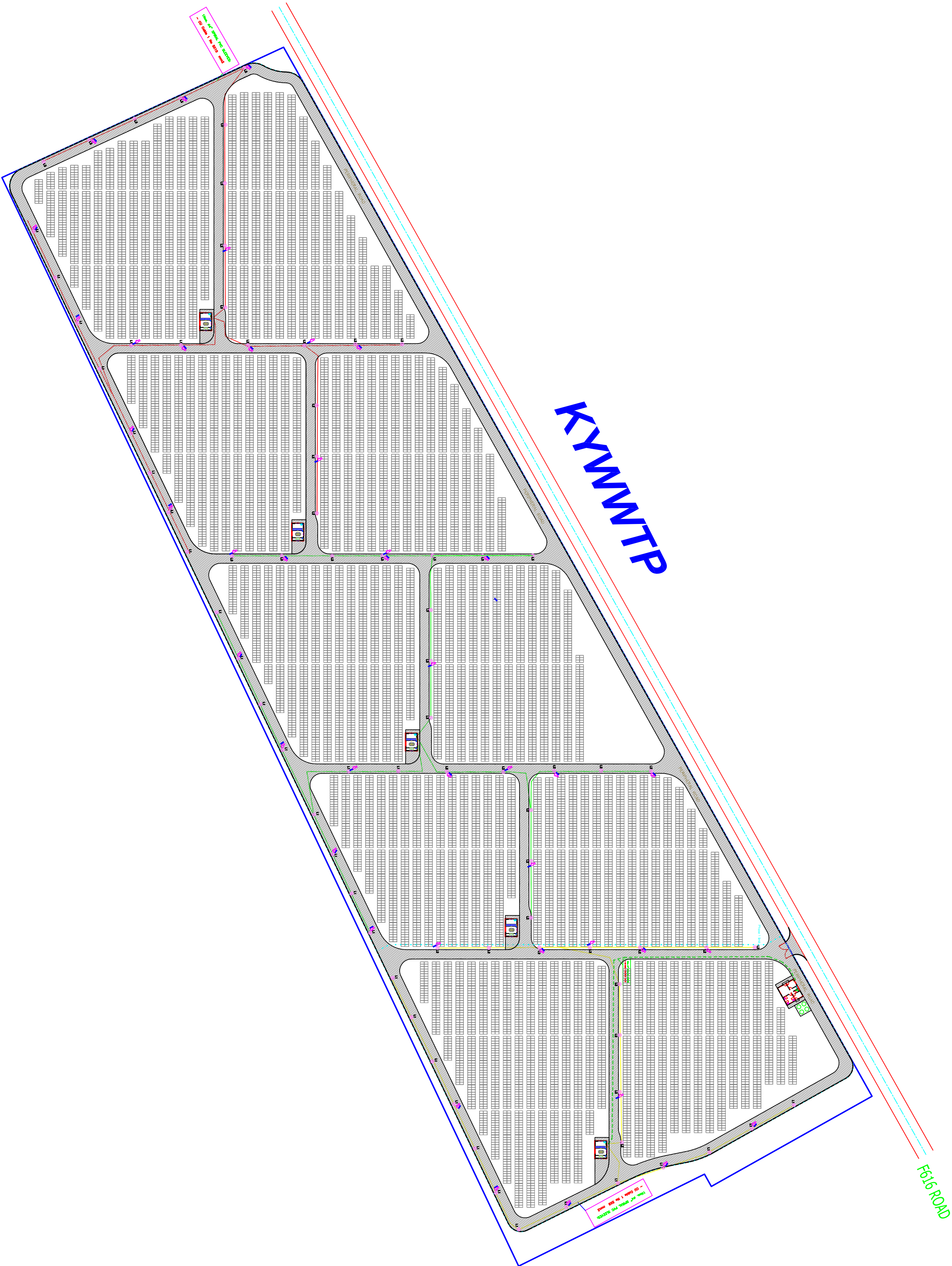
Scale:
1 : 100

Date:
JAN. 2021

LIGHTING Drawings

DRAWING NAME	DRAWING NO.
EX.LIGHTING & CAMERA LAYOUT	E -01
STEEL POLE DETAILS	E- 02
POLE BASE DETAILS	E- 03
CONTROL PANEL DETAILS	E- 04
DISTRIBUTION BOARD DETAILS	E- 05
CCTV/ MONITRING SYSTEM	E- 06

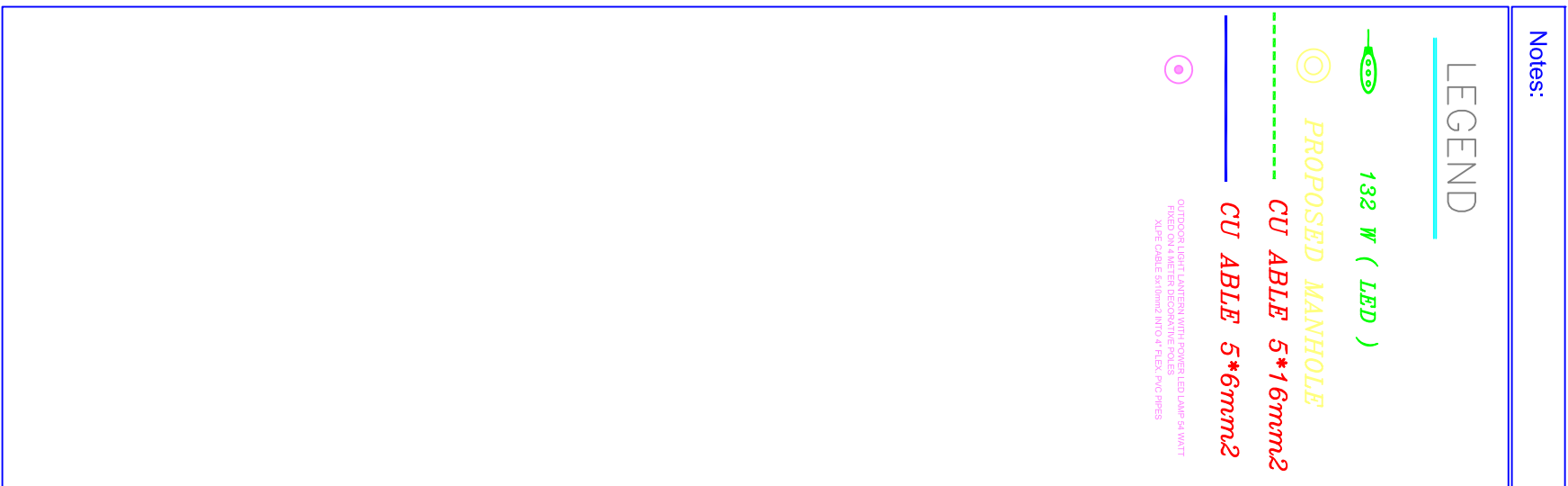
CLOSED CIRCUIT TV SYSTEM (CCTV)	
☉	DOM CAMERA FOR INTERNAL USE AND CEILING MOUNTING
📹	CCTV CAMERA FOR EXTERNAL USE,IP66
📺	NVR RACK.
🕸	80cm,DOM,MANHOLE, WITH 5 TON STEEL FRAMED COVER.



Notes:

LEGEND

- 132' W (LED)
- PROPOSED MANHOLE
- CU ABLE 5*16mm2
- CU ABLE 5*6mm2



Donor



Client



CONSULTANT



Project Name:

Construction of
Solar Energy System for Kyan-Yang Water
Water Treatment Plant (KYY WTP)

RFP No. :

PAL- 0000093741

Drawing Title:
EX LIGHTING & CAMERA LAYOUT

Design

EMCC

Checked

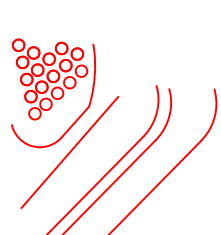
EMCC

Drawing NO. E- (01)

Scale:

Date:

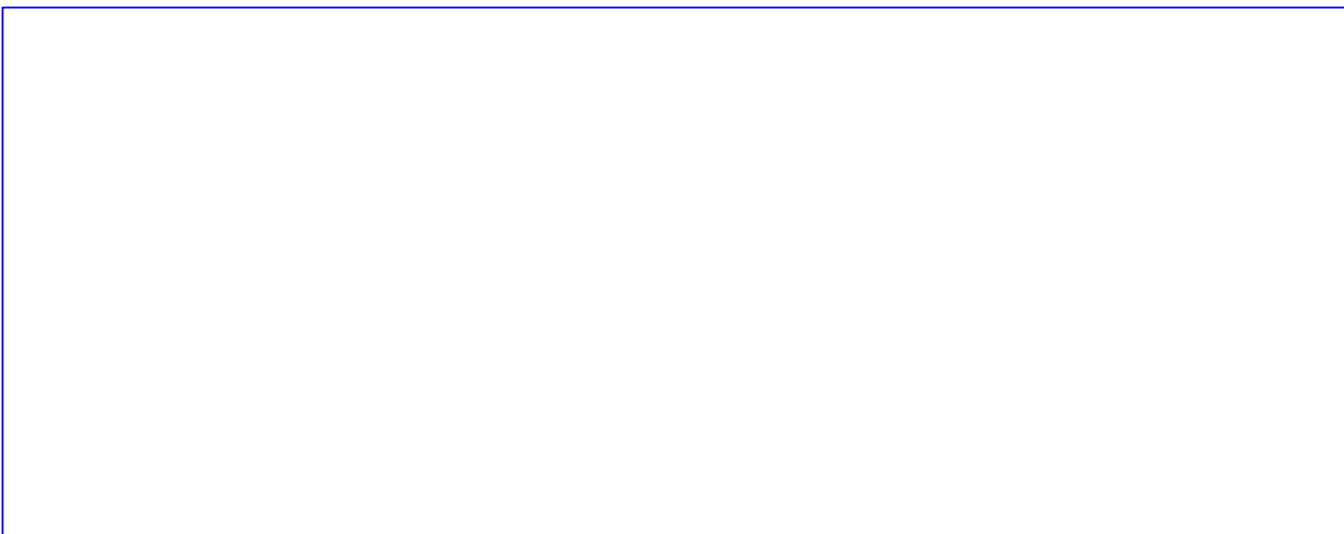
MAY, 2020

[illegible]

Notes:

LEGEND

- 132 W (LED)
- PROPOSED MANHOLE
- CU ABLE 5*16mm2
- CU ABLE 5*10mm2



Donor



Norwegian Ministry of Foreign Affairs

Client



CONSULTANT



Project Name:
Provision of Detailed Design and Technical Assistance for the Installation and Operation of Solar Energy System for Kyan-Yoma Water Treatment Plant (KY WTRP)

RFP No. :
PAL-0000093741

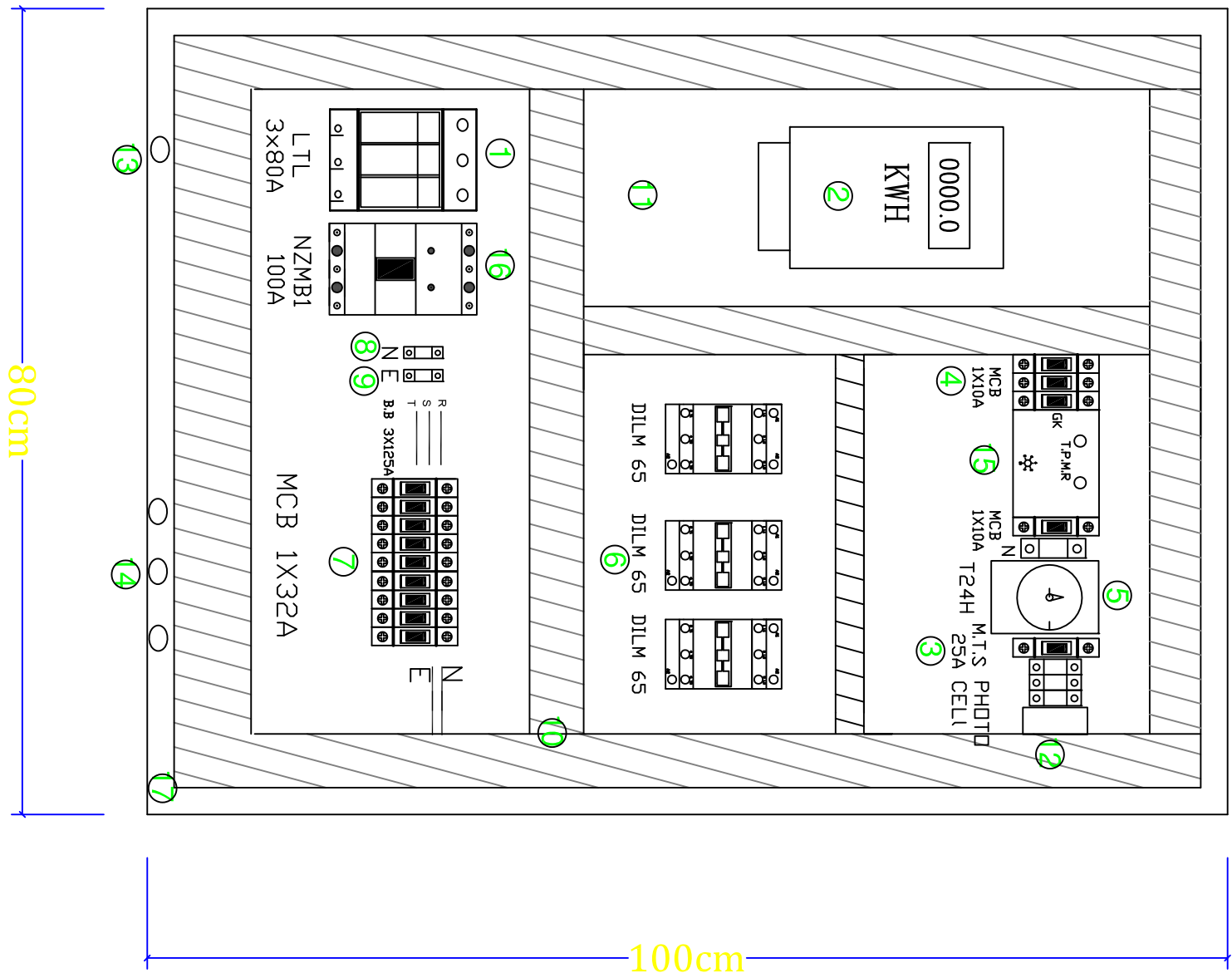
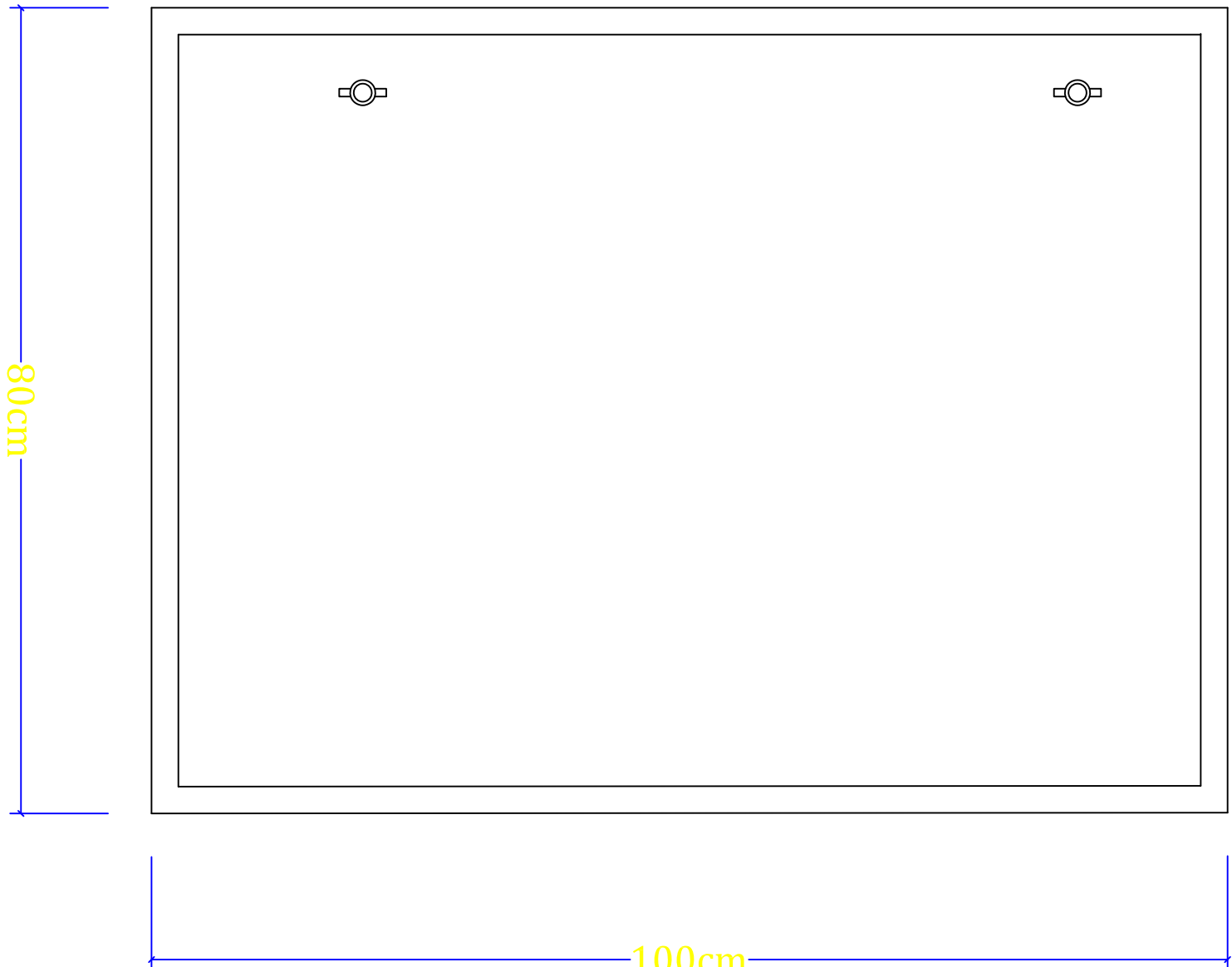
Drawing Title:
CONTROL PANEL DETAILS

Design
EMCC

Checked
EMCC

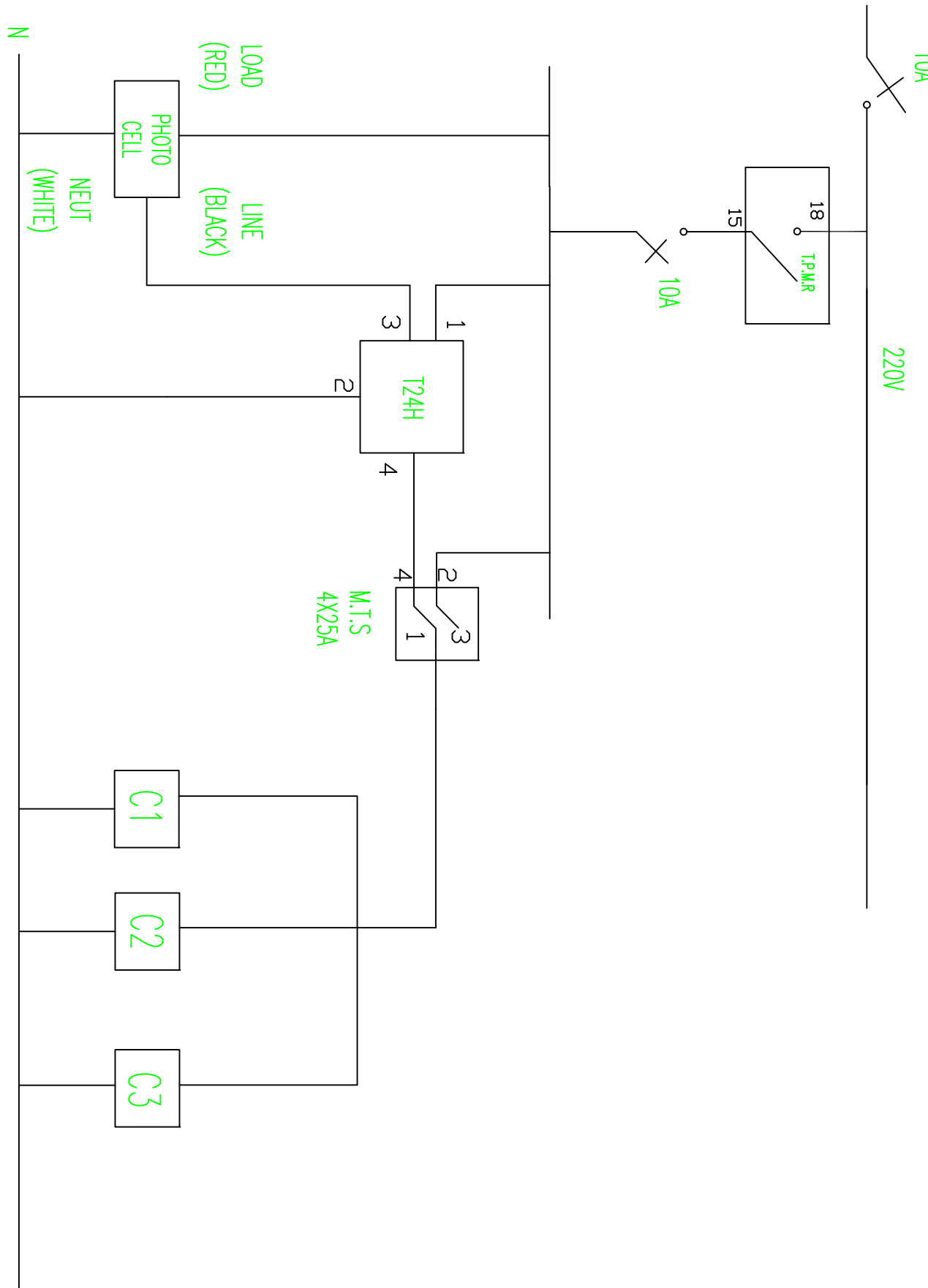
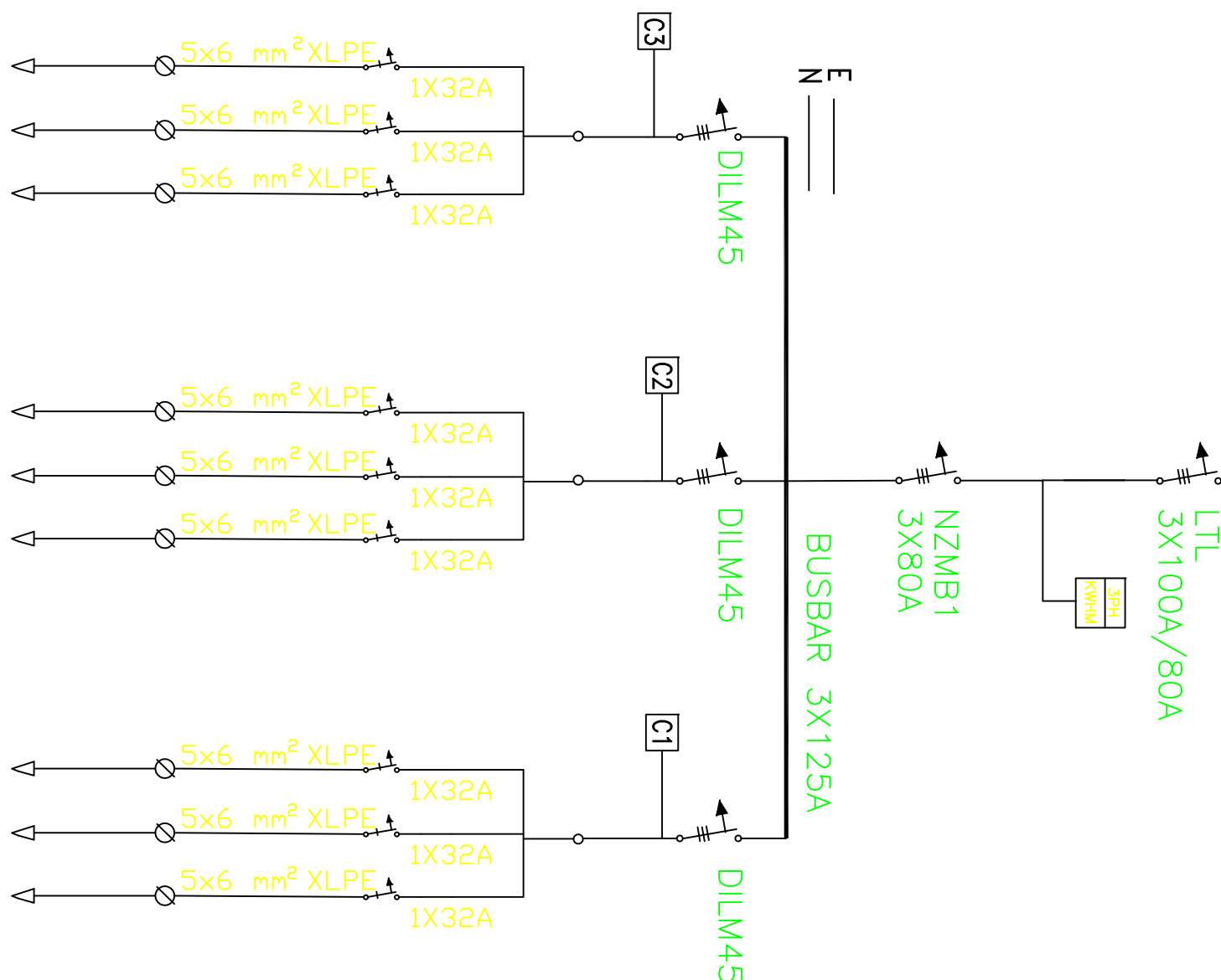
Drawing NO.
E- (04)

Scale:
Date:
MAY, 2020



XLPE CABLE 5X16A FROM L.V. PANEL

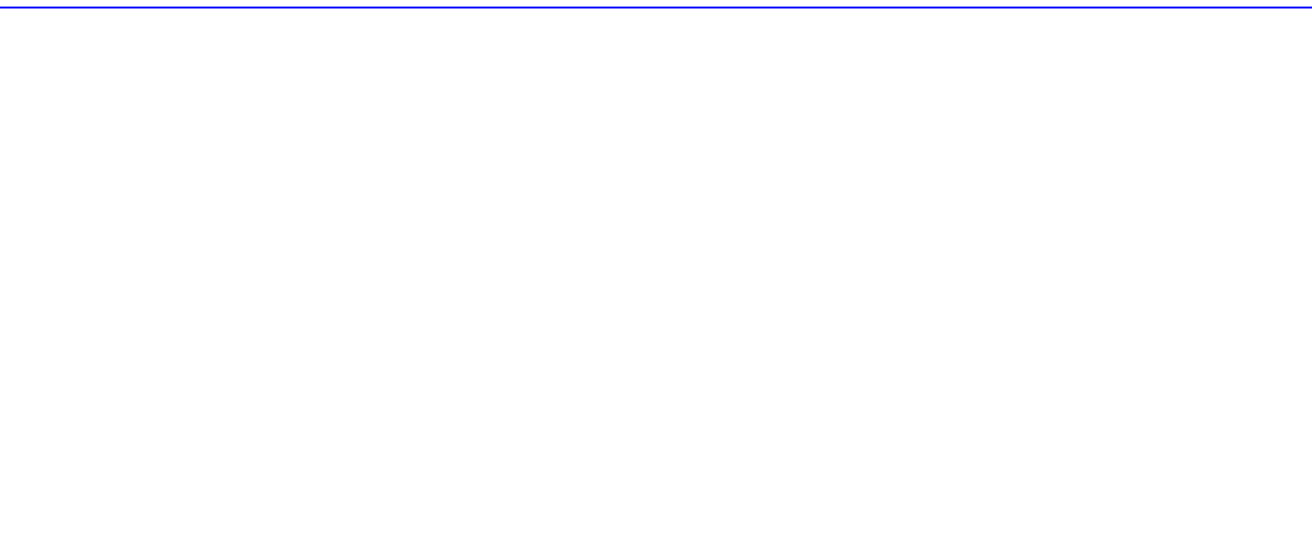
LIGHTING CONTROL PANEL



Notes:

LEGEND

- 132 # (LBD)
- PROPOSED MANHOLE
- CU ABLE 5*16mm2
- CU ABLE 5*10mm2



Donor



Norwegian Ministry of Foreign Affairs

Client



CONSULTANT

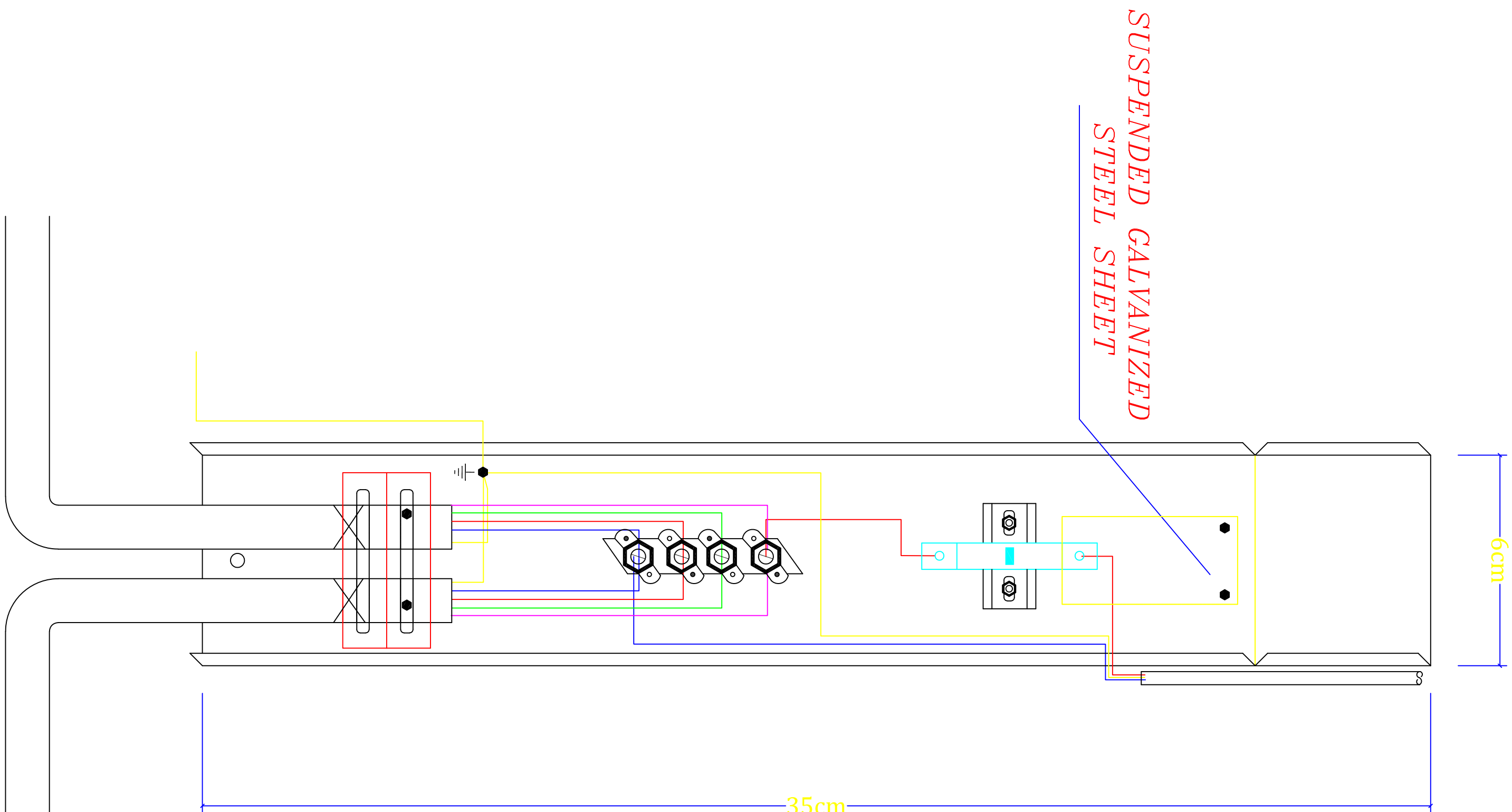
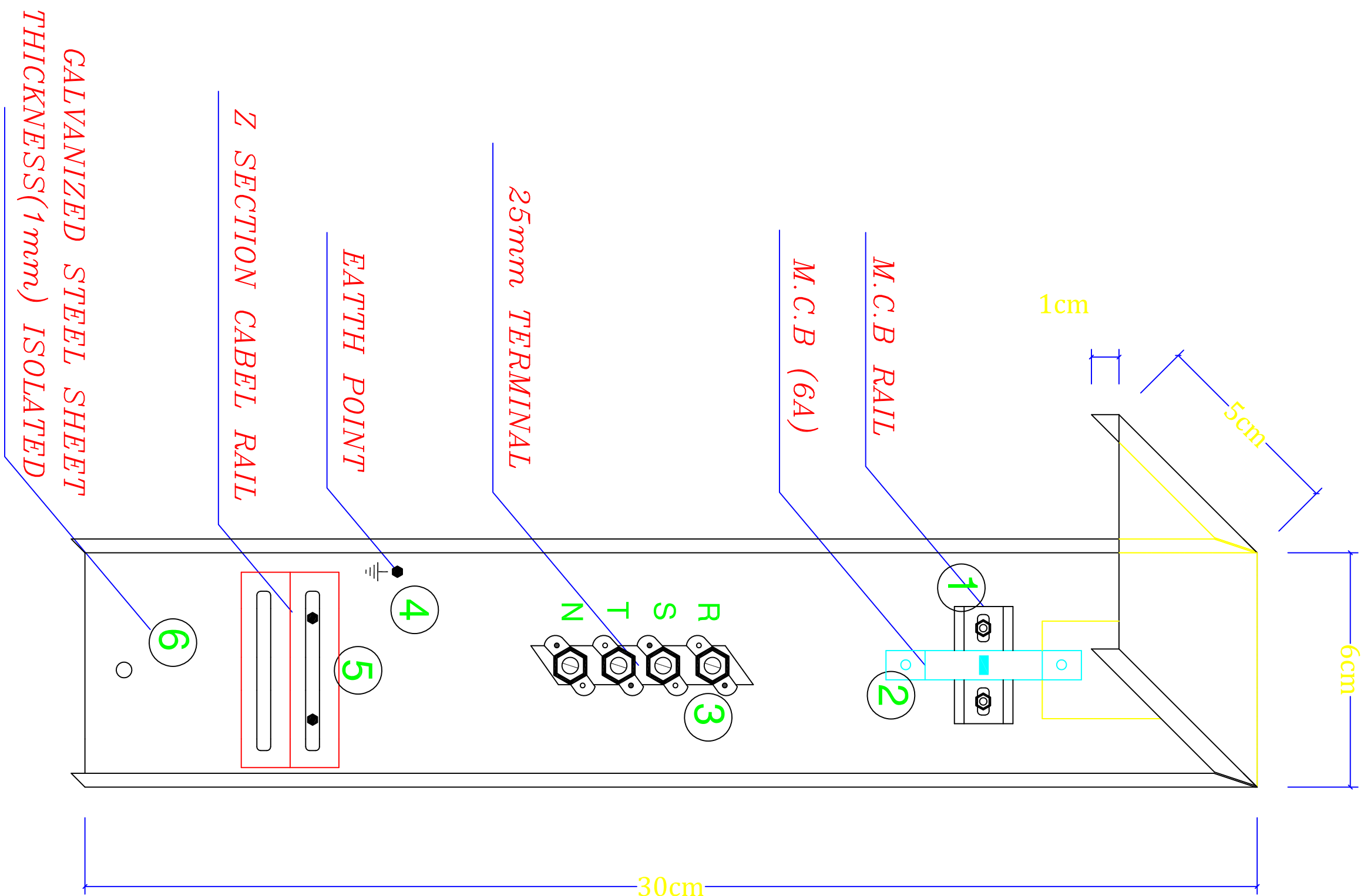


Project Name:
Provision of Detailed Design and Technical
Specifications for the Installation of
Solar Energy System for Khan Younis Waste
Water Treatment Plant (KY WWTp)

RFP No :
PAL- 0000093741

Drawing Title:
DISTRIBUTION BOARD DETAILS

Design	EMCC
Checked	EMCC
Drawing NO.	E- (05)
Scale:	
Date:	MAY, 2020

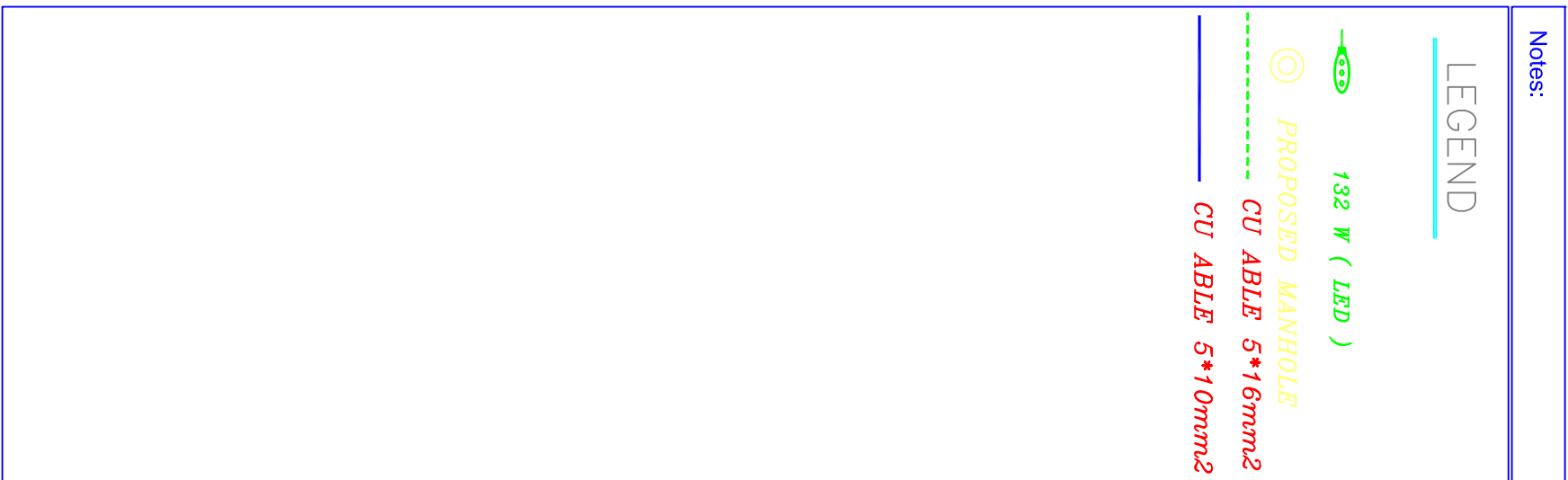


- 1 M.C.B RAIL
- 2 M.C.B (6A)
- 3 25mm TERMINAL
- 4 EARTH POINT
- 5 Z SECTION CABLE RAIL
- 6 GALVANIZED STEEL SHEET THICKNESS (1mm) ISOLATED

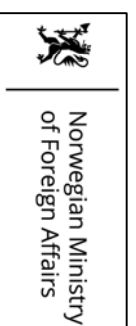
Notes:

LEGEND

- 132 # (LBD)
- PROPOSED MANHOLE
- CU ABLE 5*16mm2
- CU ABLE 5*10mm2



Donor



Norwegian Ministry of Foreign Affairs

Client



CONSULTANT



Project Name:
Provision of Detailed Design and Technical
Specifications for the Installation of a
Solar Energy System for Kibira Youth Water
Water Treatment Plant (KY WWTTP)

RFP No :
PAL- 0000093741

Drawing Title:
CCTV/ MONTRING SYSTEM

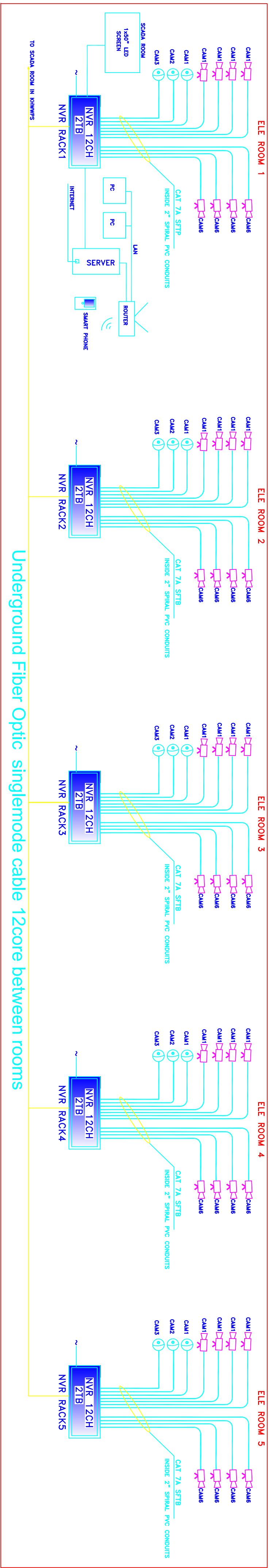
Design
EMCC

Checked
EMCC

Drawing NO. E- (06)

Scale:

Date: MAY. 2020



Underground Fiber Optic singlemode cable 12core between rooms
CCTV/ MONTRING SYSTEM
RIZER DIAGRAM