REPUBLIC OF THE PHILIPPINES

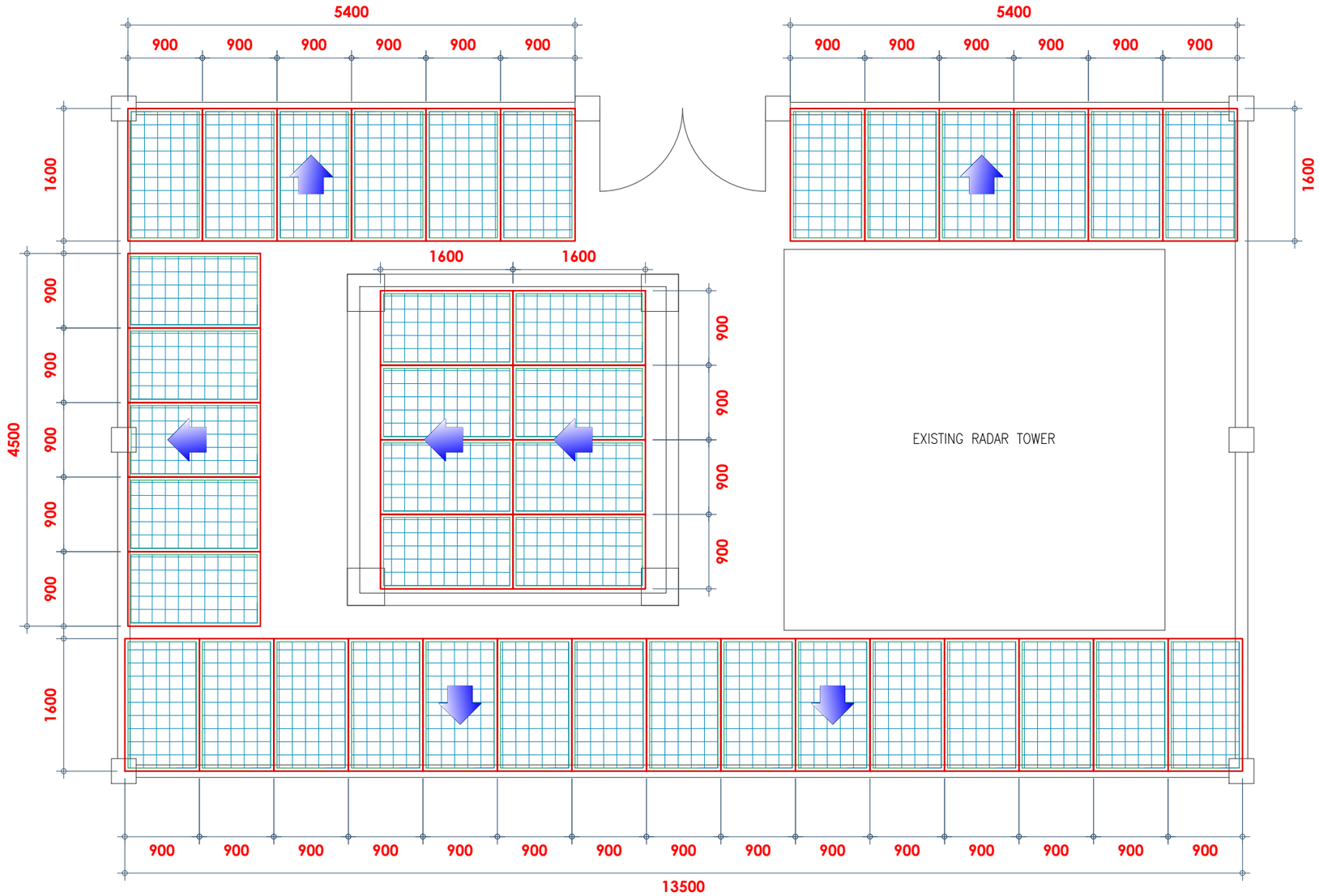
PHILIPPINE PORTS AUTHORITY

PMO-BATANGAS BATANGAS CITY

CONSTRUCTION DRAWING

REPAIR/IMPROVEMENT OF POWER/ELECTRICAL SYSTEM OF RADAR STATION 4

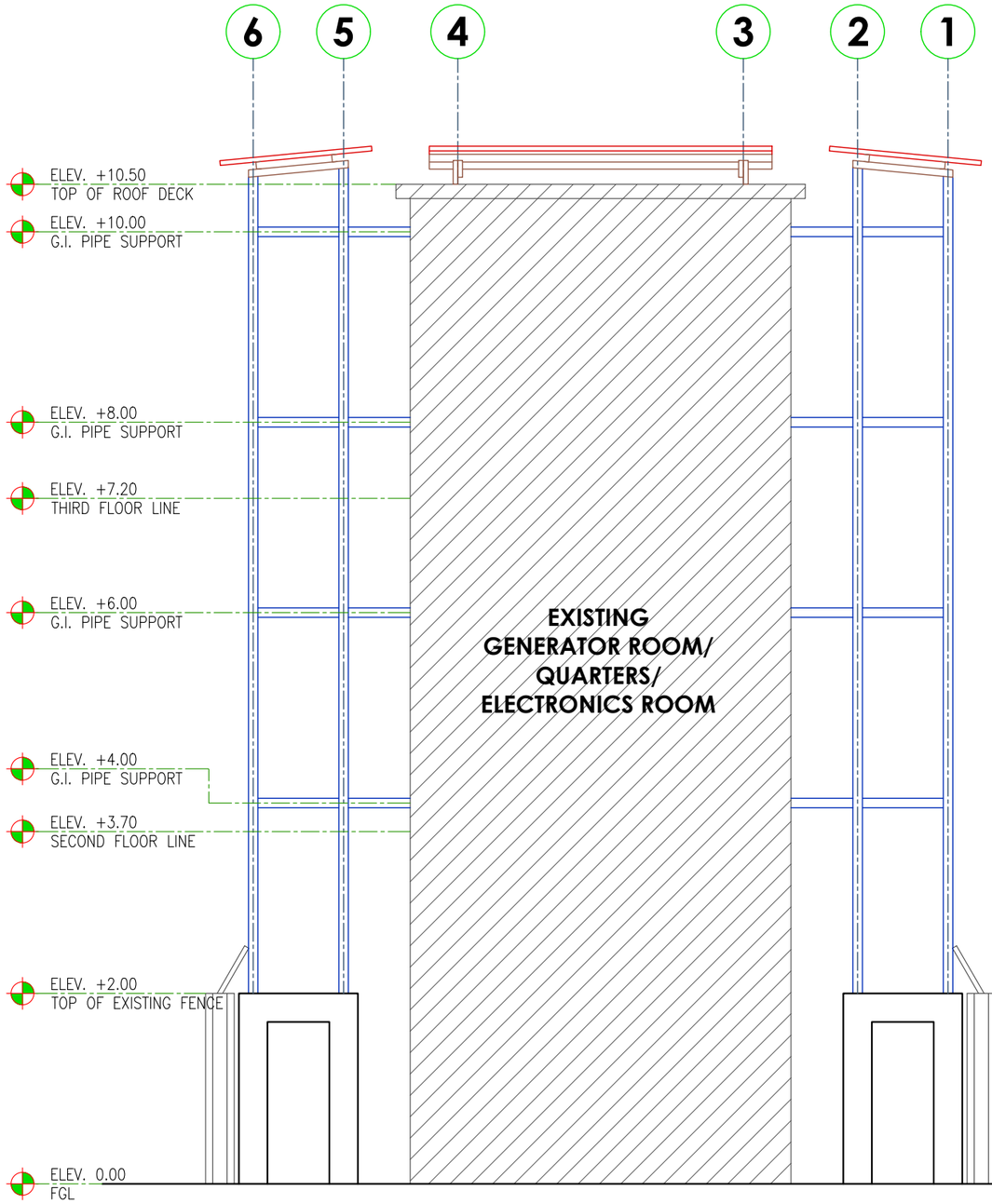
MARICABAN ISLAND, TINGLOY, BATANGAS



SOLAR PANEL LAYOUT

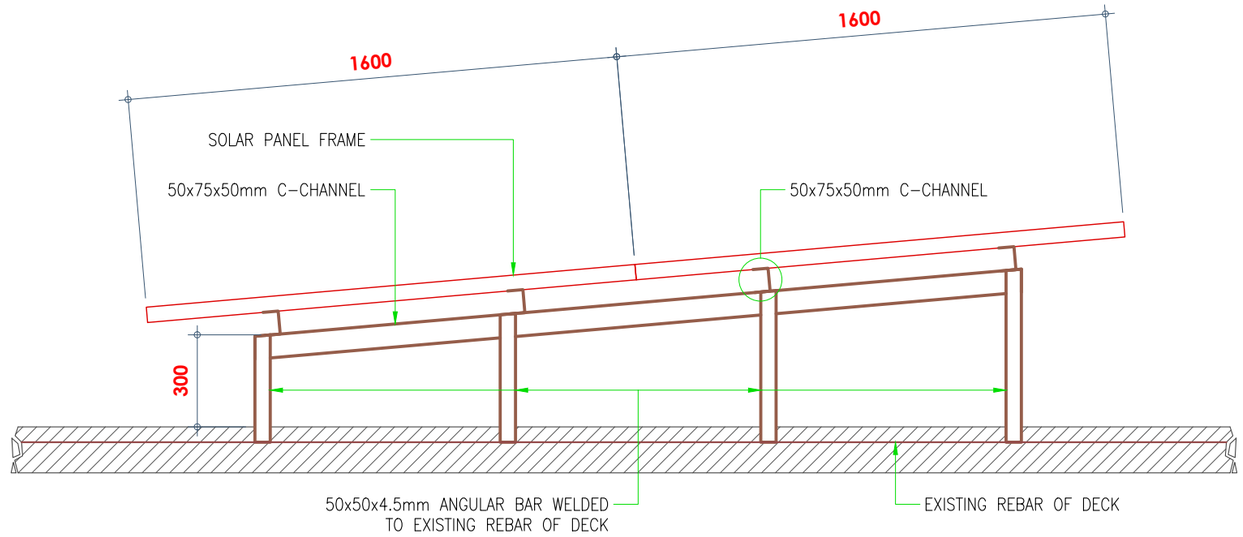
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PHILIPPINE PORTS AUTHORITY PMO-BATANGAS BATANGAS CITY	PROJECT TITLE : **REPAIR/IMPROVEMENT OF POWER/ ELECTRICAL SYSTEM OF RADAR STATION 4** LOCATION : MARICABAN ISLAND, TINGLOY, BATANGAS	CAD BY : (SIGNED) **G. A. ARAGO** CAD OPERATOR	PREPARED BY : (SIGNED) **C. L. RABINA** PRINCIPAL ENGINEER	REVIEWED BY : (SIGNED) **C. B. GUCE** ESD MANAGER	APPROVED : (SIGNED) **LEOPOLDO C. BISCOCHO, JR.** PORT MANAGER	SHEET CONTENTS : AS-SHOWN	SHEET NO : 01 08 DATE: Jul - 2017



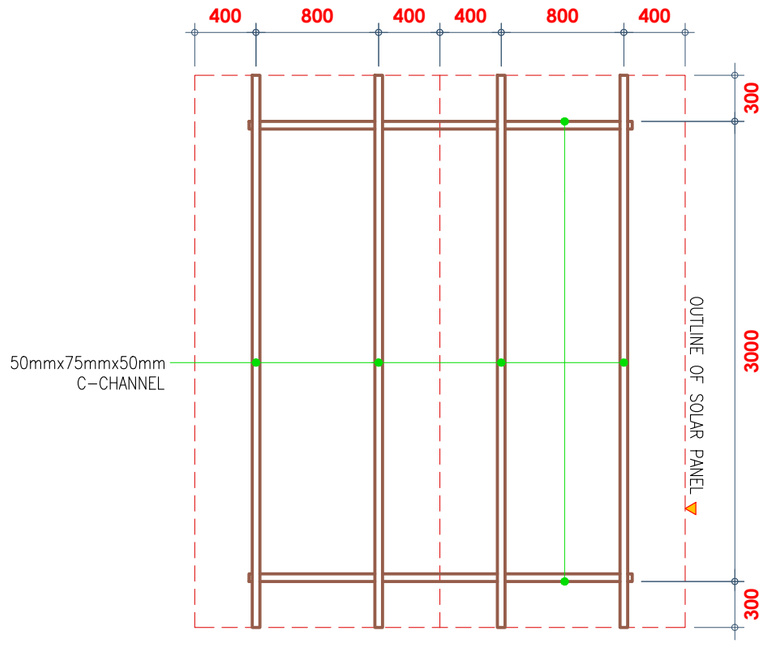
LEFT SIDE ELEVATION

SCALE: 1:60



SOLAR PANEL DETAIL AT ROOF DECK

SCALE: 1:20



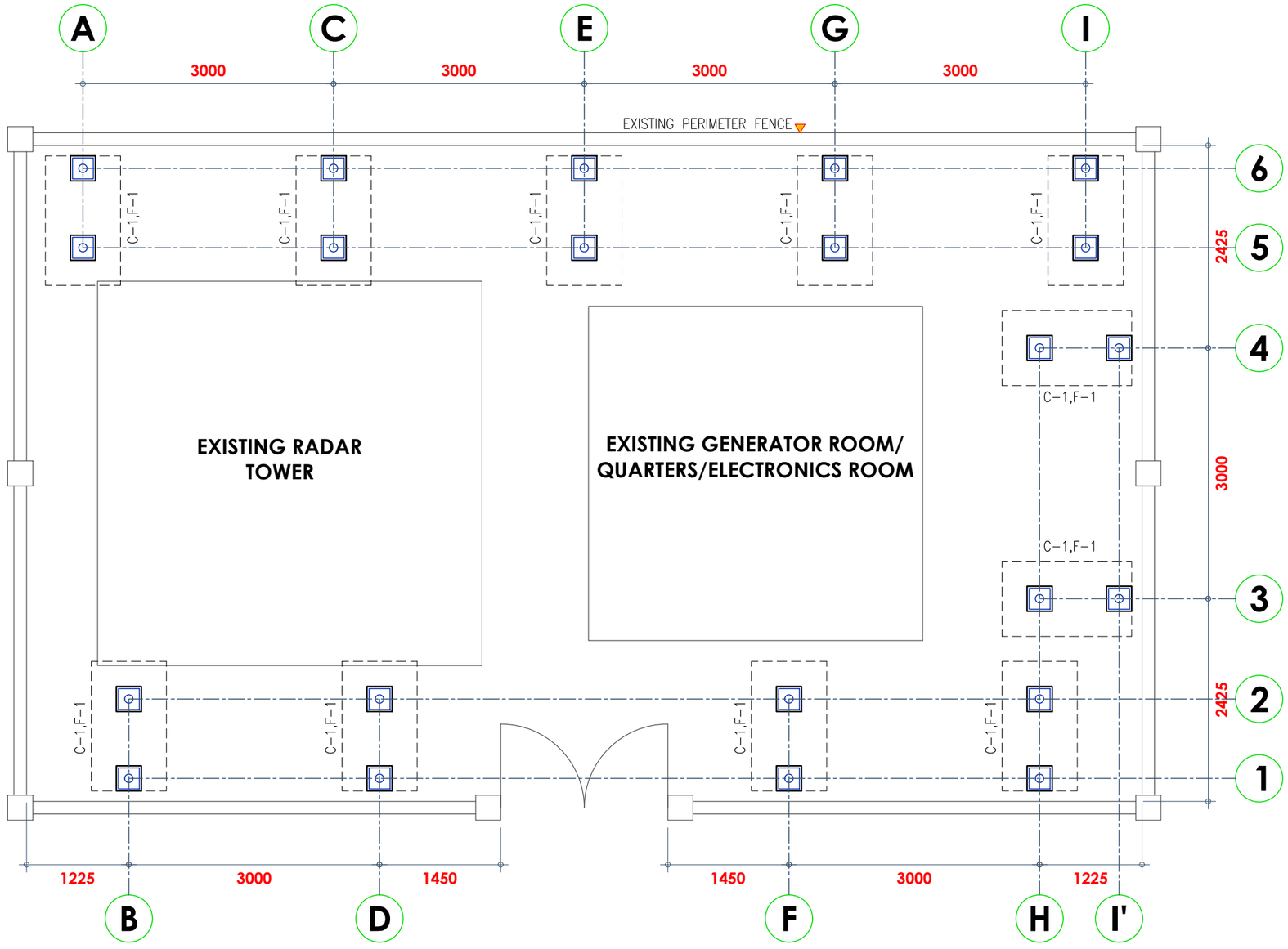
PLAN

SCALE: 1:40

PHILIPPINE PORTS AUTHORITY

PMO-BATANGAS BATANGAS CITY

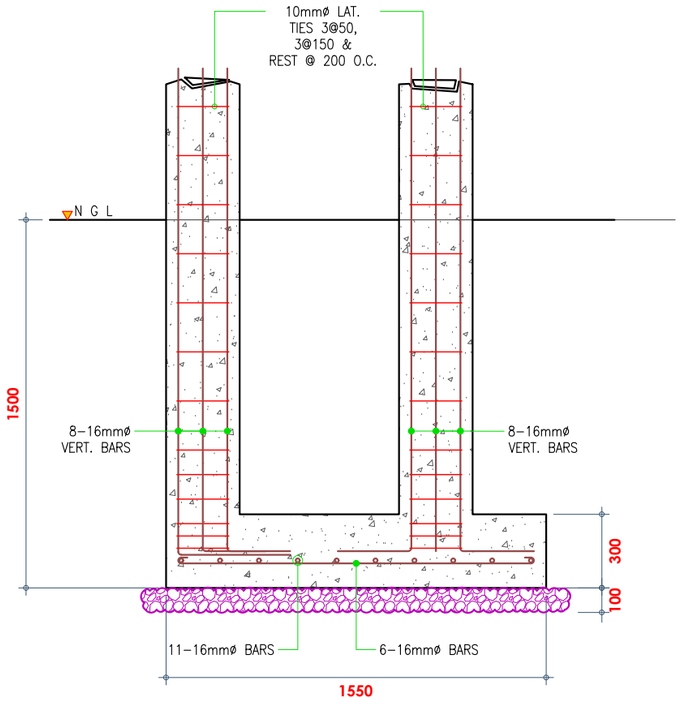
PROJECT TITLE :	CAD BY :	PREPARED BY :	REVIEWED BY :	APPROVED :	SHEET CONTENTS :	SHEET NO :
REPAIR/IMPROVEMENT OF POWER/ ELECTRICAL SYSTEM OF RADAR STATION 4 LOCATION : MARICABAN ISLAND, TINGLOY, BATANGAS	(SIGNED) **G. A. ARAGO** CAD OPERATOR	(SIGNED) **C. L. RABINA** PRINCIPAL ENGINEER	(SIGNED) **C. B. GUCE** ESD MANAGER	(SIGNED) **LEOPOLDO C. BISCOCHO, JR.** PORT MANAGER	AS-SHOWN	02 | 08 DATE: Jul - 2017



FOUNDATION PLAN

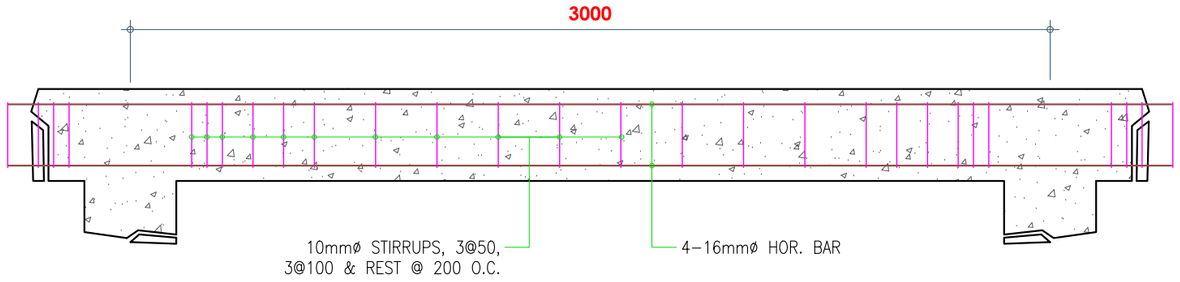
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PHILIPPINE PORTS AUTHORITY PMO-BATANGAS BATANGAS CITY	PROJECT TITLE : **REPAIR/IMPROVEMENT OF POWER/ ELECTRICAL SYSTEM OF RADAR STATION 4** LOCATION : MARICABAN ISLAND, TINGLOY, BATANGAS	CAD BY : (SIGNED) **G. A. ARAGO** CAD OPERATOR	PREPARED BY : (SIGNED) **C. L. RABINA** PRINCIPAL ENGINEER	REVIEWED BY : (SIGNED) **C. B. GUCE** ESD MANAGER	APPROVED : (SIGNED) **LEOPOLDO C. BISCOCHO, JR.** PORT MANAGER	SHEET CONTENTS : AS-SHOWN	SHEET NO : 03 08 DATE: Jul - 2017



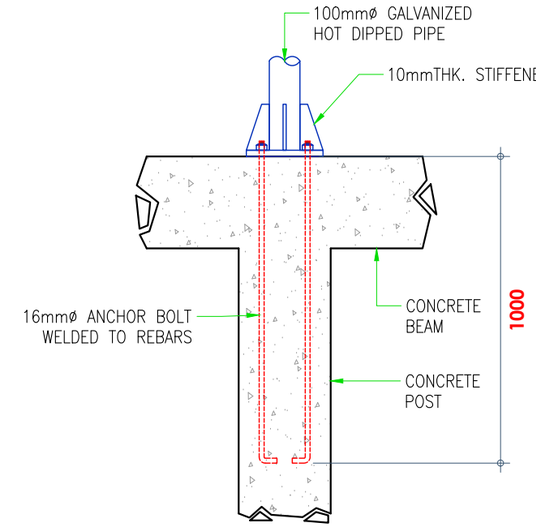
C-1,F-1 DETAIL SECTION

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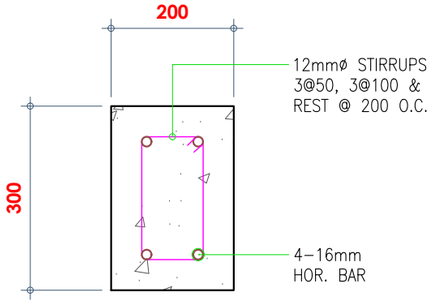
CONC. BEAM DETAIL

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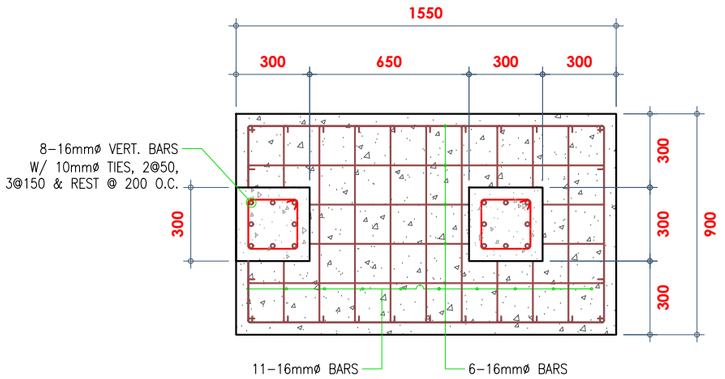


CONNECTION DETAIL

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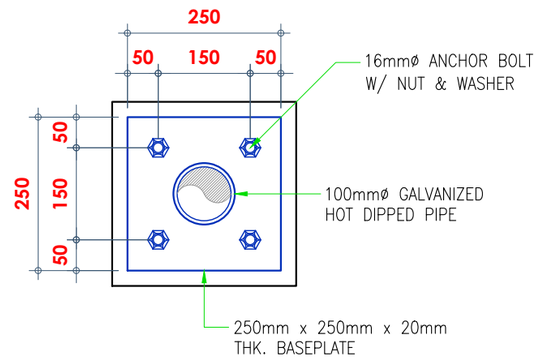


SECTION



C-1,F-1 PLAN

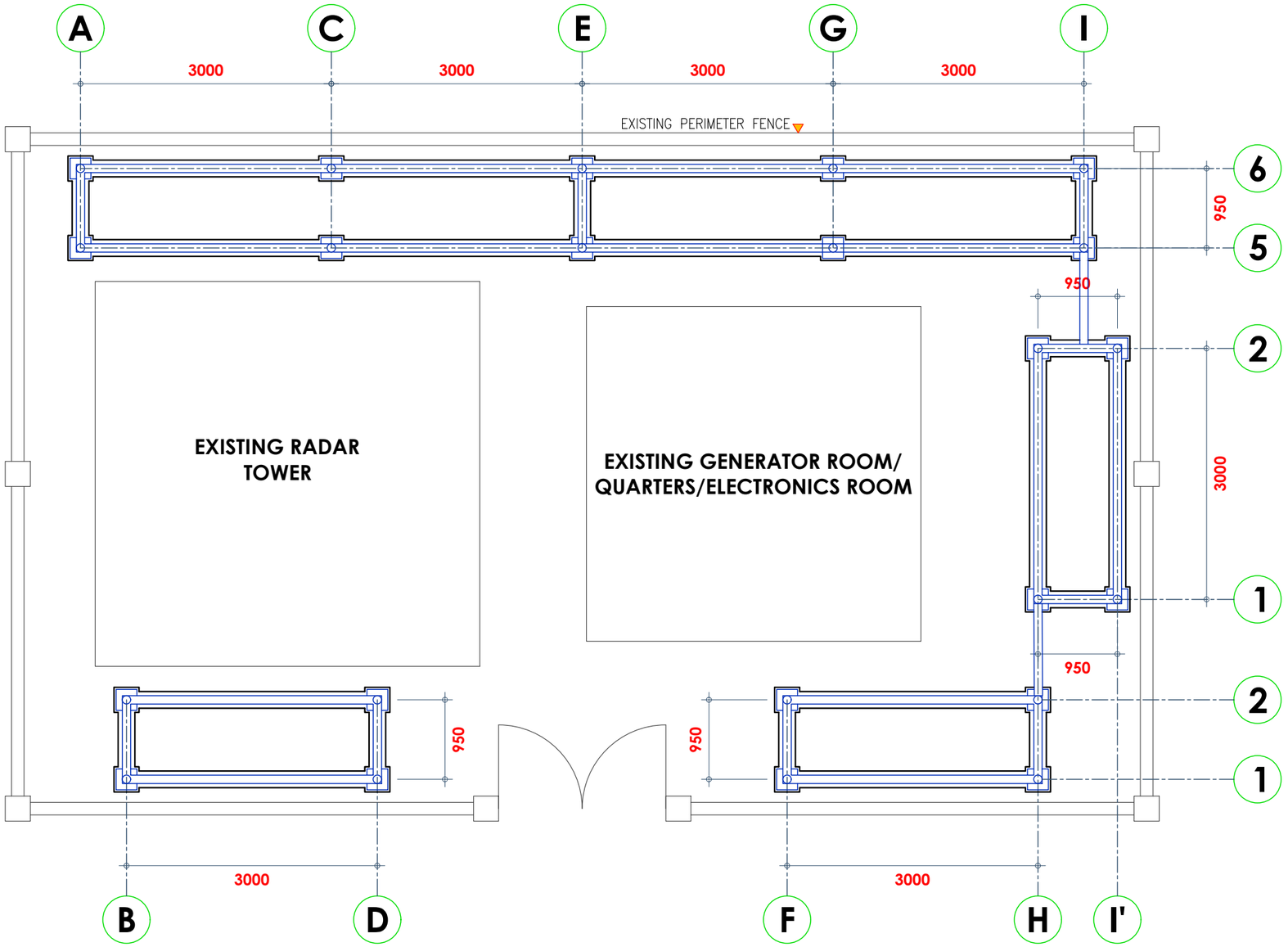
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PLAN

SCALE: 1:10

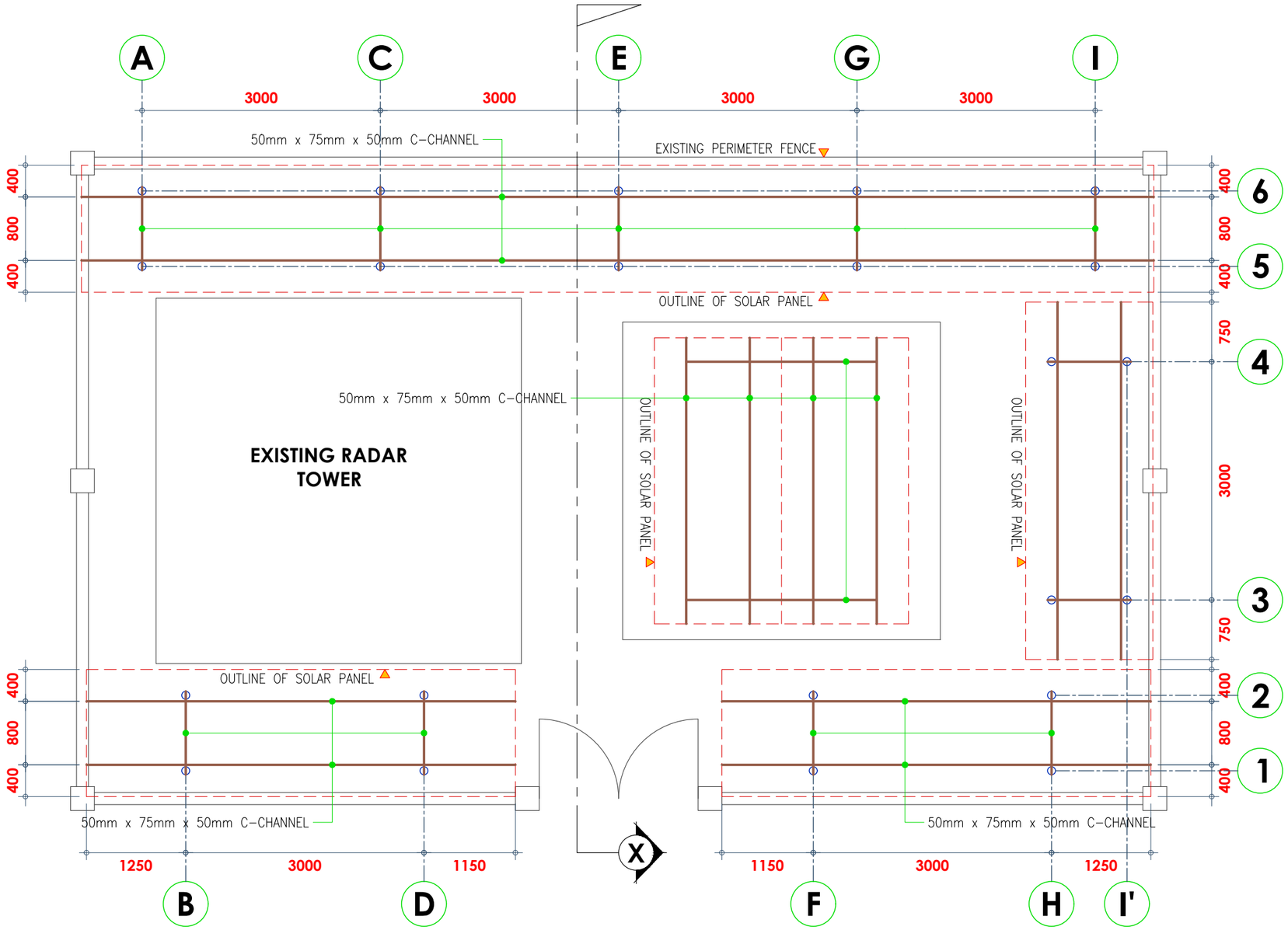
PHILIPPINE PORTS AUTHORITY PMO-BATANGAS BATANGAS CITY	PROJECT TITLE : **REPAIR/IMPROVEMENT OF POWER/ ELECTRICAL SYSTEM OF RADAR STATION 4** LOCATION : MARICABAN ISLAND, TINGLOY, BATANGAS	CAD BY : (SIGNED) **G. A. ARAGO** CAD OPERATOR	PREPARED BY : (SIGNED) **C. L. RABINA** PRINCIPAL ENGINEER	REVIEWED BY : (SIGNED) **C. B. GUCE** ESD MANAGER	APPROVED : (SIGNED) **LEOPOLDO C. BISCOCHO, JR.** PORT MANAGER	SHEET CONTENTS : AS-SHOWN	SHEET NO : 04 08 DATE: Jul - 2017



CONCRETE BEAM AND G.I. POST SUPPORT LAYOUT

SCALE: 1:60

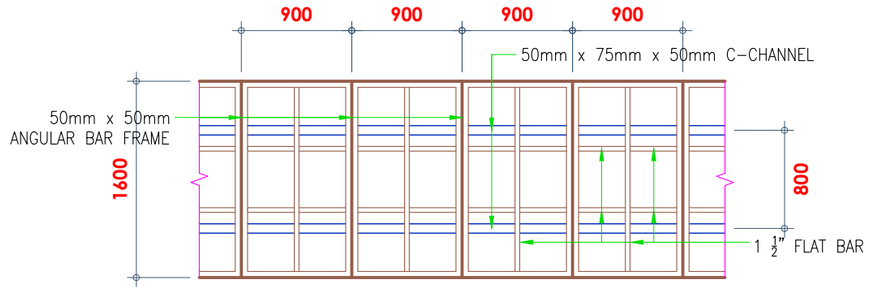
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SOLAR PANEL FRAMING PLAN

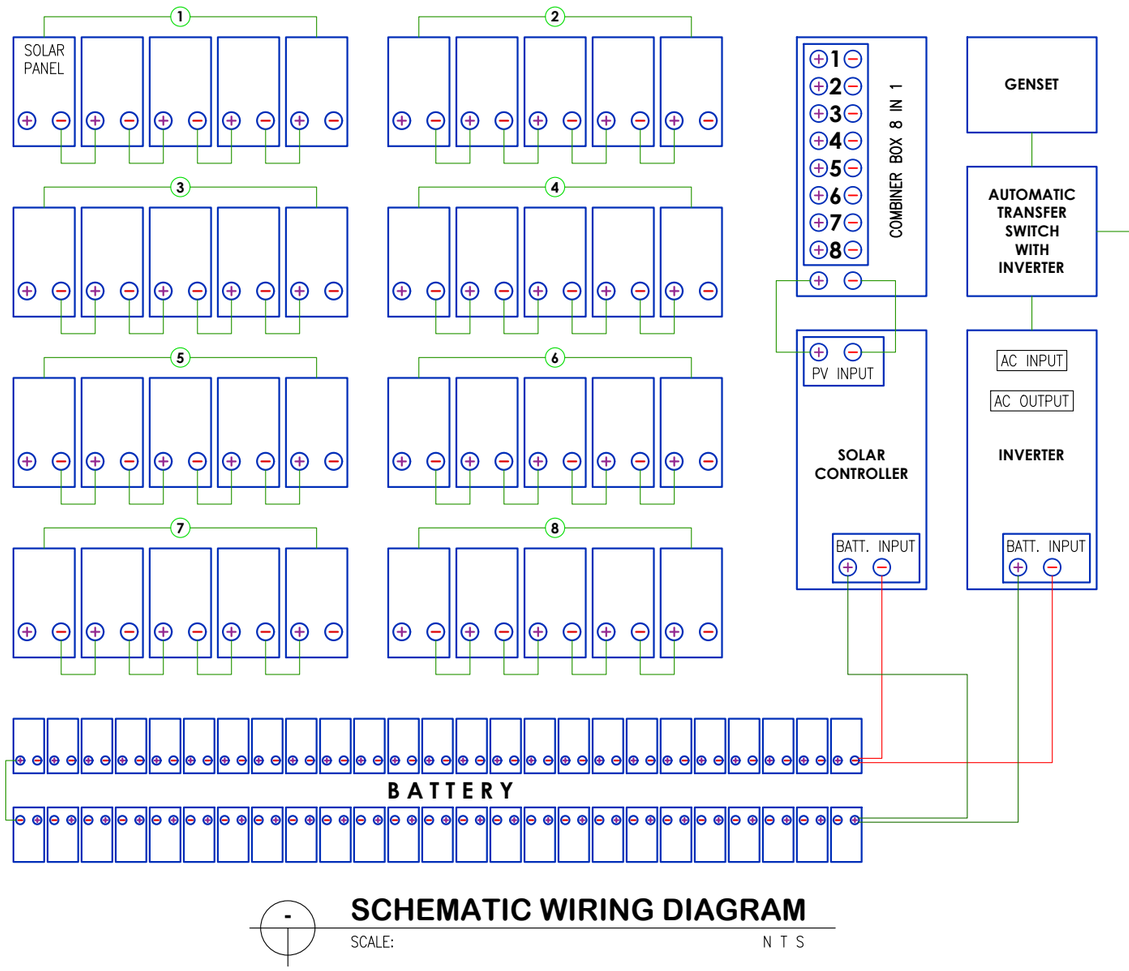
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SOLAR PANEL FRAME DETAIL

SCALE: 1:50



SCHEMATIC WIRING DIAGRAM

SCALE: N T S

Off-grid Solar System

Model: TY090A

Product Name	Specification	QTY(PCS)			warranty	
Solar panel	10.6KW	40			10 years	
Solar controller	96V100A	1			3 years	
Inverter	96V15KVA(10kw)	1			3 years	
Lead-acid battery	2V500AH*48PCS	48			3 years	
combiner box	4 in 1/SETS	1			5 years	- Integrated design, easy install and maintain -LCD display +LED status indicator - Output isolated transformer, safe and stable - Excellent overload
power box	SETS	1			5 years	
bracket	aluminium alloy	1			10 years	
PV cable	4mm	1			10 years	
battery rack	SETS	1			10 years	
ATS with Inverter-96V15KVA(10Kw)	SETS	1			3 years	
other parts	SETS	1			10 years	
Total						

Technical Parameter

Product Name	Specification			Picture
Solar panel	Model No.		TYP265W (Poly crystalline)	
	Rated Maximum Power		265 W	
	Quantity		40 pcs	
	Maximum Power		Voltage:30 V - Current: 8.33A	
	Open Circuit Voltage(Voc)		36 V	
	Short Circuit Current(Isc)		9.17 A	
	Maximum System Voltage		1000 V	
	Operating Temperature		-40°C～+85°C	
	Standard Test Conditions		1000W/m2, AM1.5, 25°C	
Lead-acid battery	Nominal Capacity		2V500AH*48 pcs	
Solar controller	Rated Voltage(V)		96V	
	Maximum charging current(A)		100 A	
	ChargeVoltage(V)		Floating charge: 115.2V Equalizing charge:110.4V	
	Voltage range (V)		86.4-132V	
	Operating temp.		-40°C～+60°C	
Inverter	Rated power		15KVA(10kw)	
	DCinput voltage range		84-120V	
	ACinput Voltage & Frequency		220V±25% ;60Hz±5%	
	ACoutput Voltage & Frequency		220V±10%;60Hz±3%	
	Wave form: Pure sine wave		THDI: <5% (linear load)	
	Power factor: 0.9		Effeciancy: >85%	
	AC charging current (A)		Rated: 10, Max.: 15	
	Max. operating altitude		3000 (>3000m derating)	
	Storage temperature range		-25°C～+70°C	
	Cooling method		Air cooling	
	Operating temperature range (°C)		−20~+50 (>50°C derating)	
	Relative humidity in operation		0~95% (non-condensing)	
	Noise emission [dB (A)]		<55 (at 1 meter)	
	Communication interface		RS232 (optional)	
	Over load capacity		100~125% 10min; 125~150% 1min; 150~200% 5s	
	Complete protections		DC & AC overload, under-voltage, SPD, short-circuit, overcharge, overdischarge, over-temperature	
Accessories	PV cables: 4mm²*600m; PV brackets; Battery box; Lightning protection distribution box; Manual: 1 pc			
Automatic Transfer Switch function and charging batteries switch	Complete protections		DC & AC overload, under-voltage, SPD, short-circuit, overcharge, overdischarge, over-temperature	

PHILIPPINE PORTS AUTHORITY

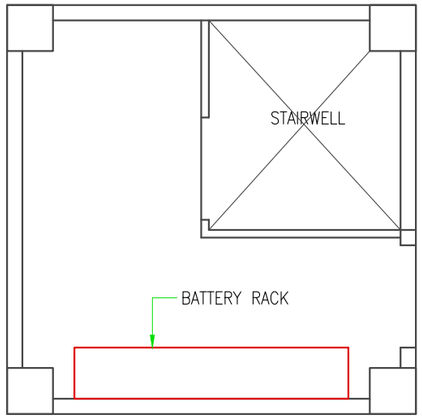
PMO-BATANGAS BATANGAS CITY

PROJECT TITLE :

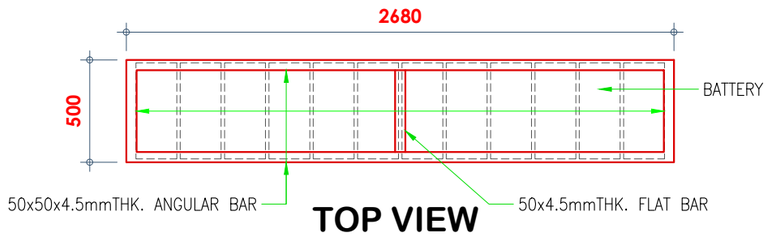
REPAIR/IMPROVEMENT OF POWER/ ELECTRICAL SYSTEM OF RADAR STATION 4

LOCATION : MARICABAN ISLAND, TINGLOY, BATANGAS

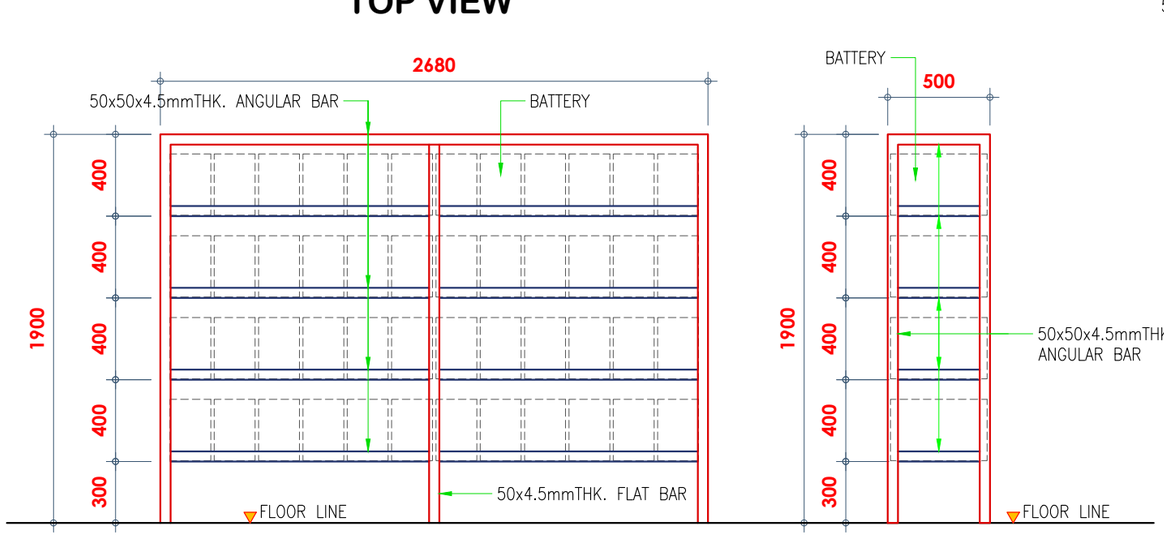
CAD BY :	PREPARED BY :	REVIEWED BY :	APPROVED :	SHEET CONTENTS :	SHEET NO :
(SIGNED)	(SIGNED)	(SIGNED)	(SIGNED)		07 | 08
G. A. ARAGO	**C. L. RABINA**	**C. B. GUCE**	**LEOPOLDO C. BISCOCHO, JR.**	AS-SHOWN	DATE:
CAD OPERATOR	PRINCIPAL ENGINEER	ESD MANAGER	PORT MANAGER		Jul - 2017



BATTERY RACK LOCATION AT THIRD FLOOR

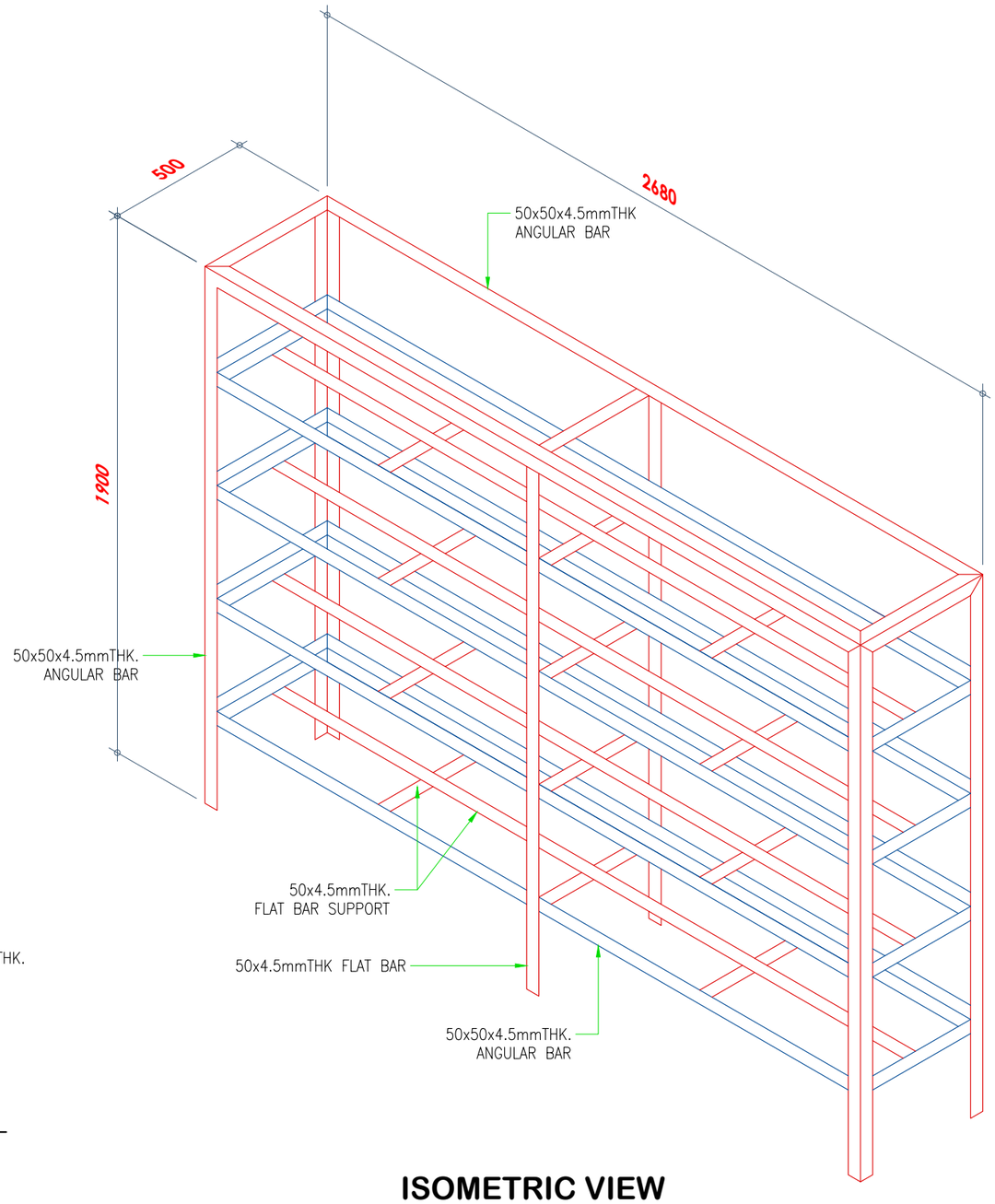


TOP VIEW



FRONT VIEW

SIDE VIEW



ISOMETRIC VIEW

- BATTERY RACK DETAIL

SCALE: 1:30

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