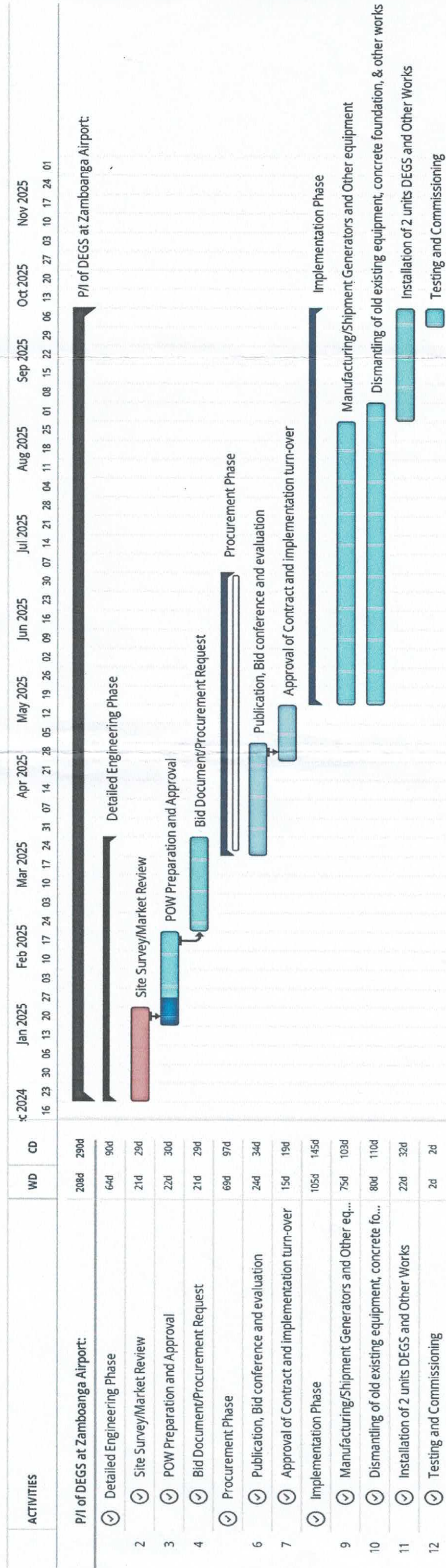


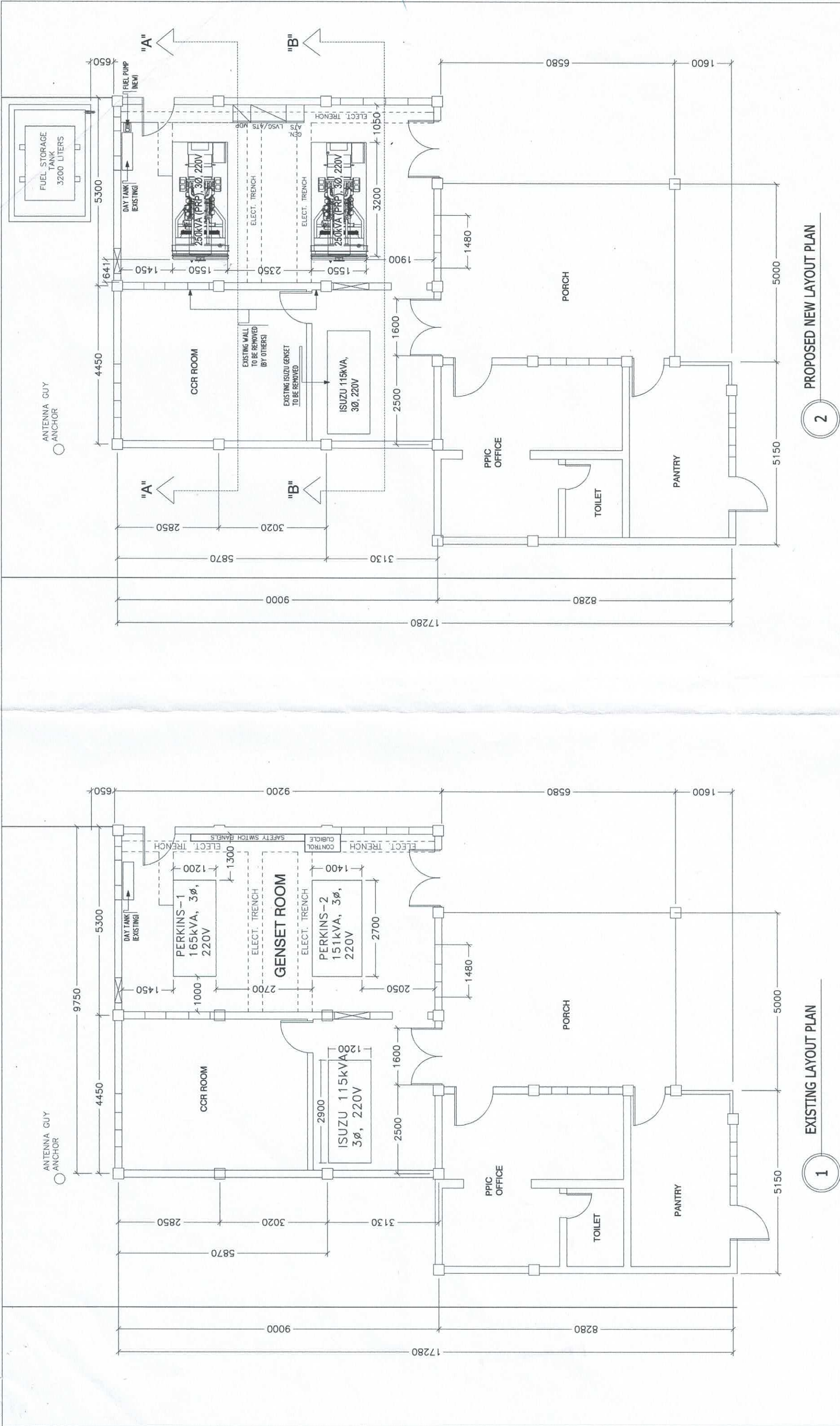
PURCHASE/INSTALLATION OF DEGS AT ZAMBOANGA AIRPORT
Schedule of Activities



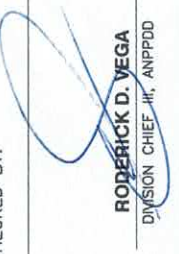
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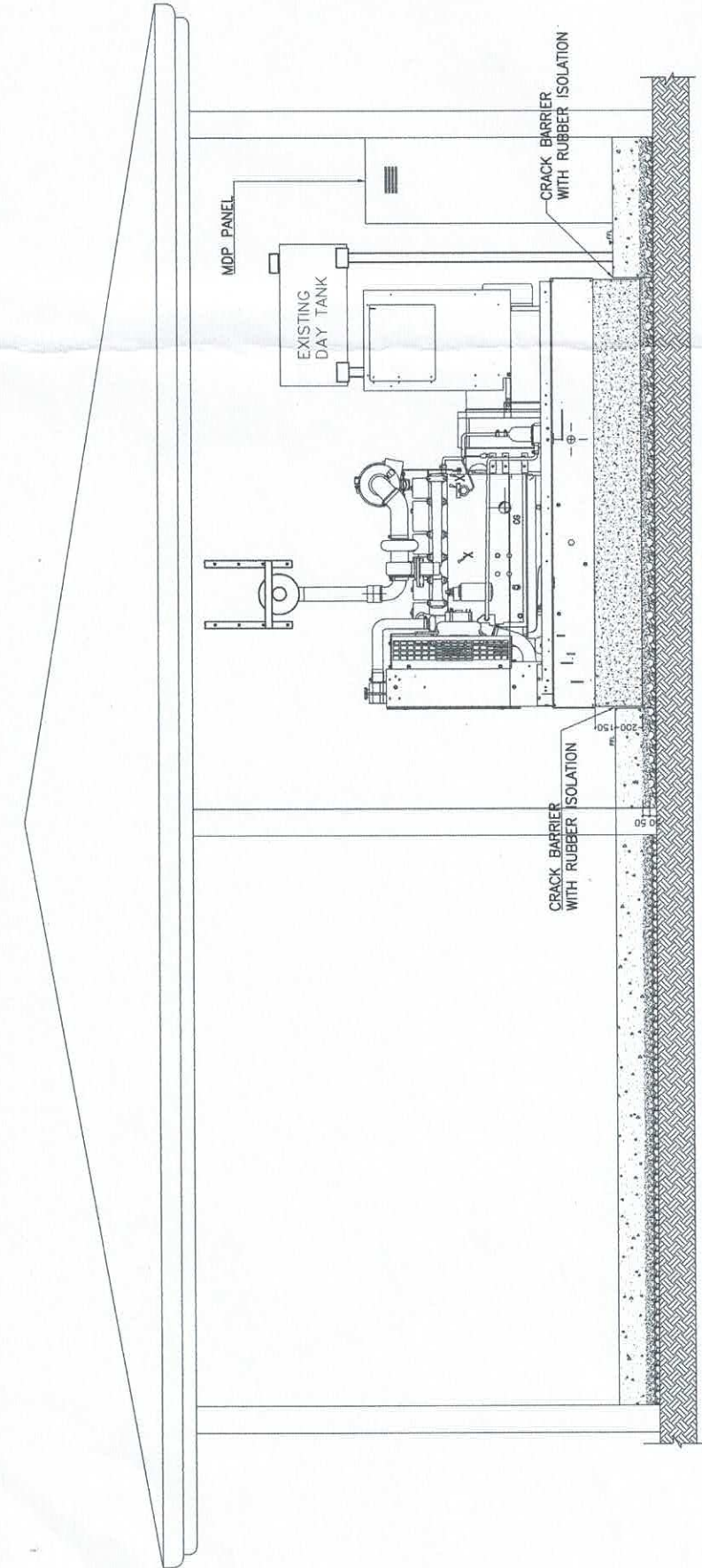

RODERICK D. VEGA

Division Chief III, ANPPDD/EMD

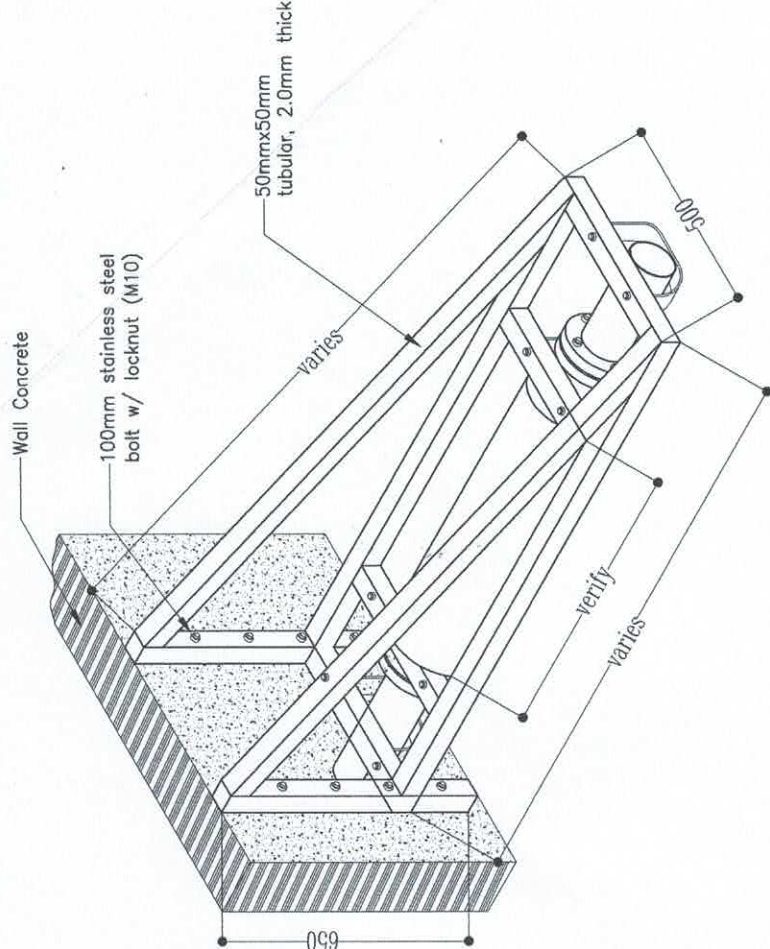


POWERHOUSE LAYOUT PLAN
SCALE: 1:100 MTS

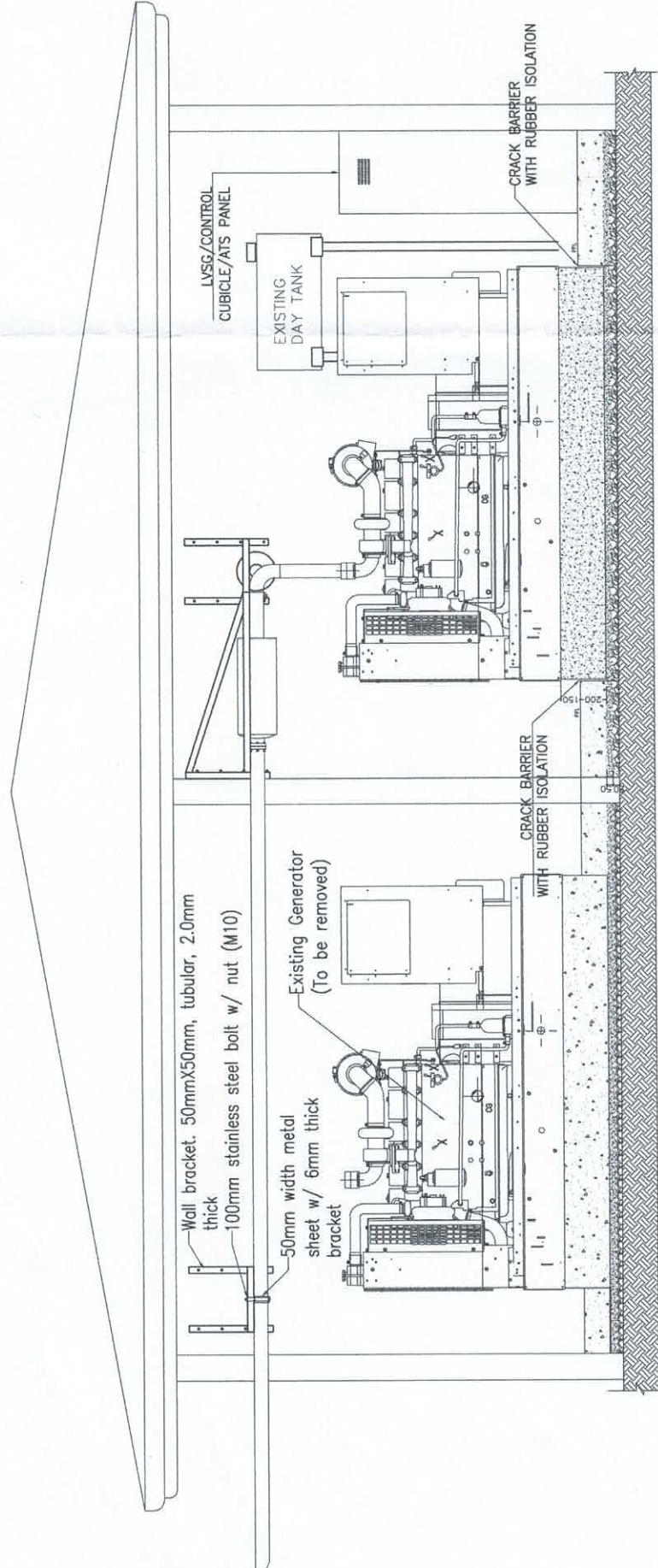
CIVIL AVIATION AUTHORITY OF THE PHILIPPINES	TITLE:	PREPARED BY:	CHECKED BY:	REVIEWED BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:	SHEET NO.:
	PURCHASE/INSTALLATION OF DIESEL ENGINE GENERATOR SET (DEGS) AT ZAMBOANGA AIRPORT	 ERNEE C. CAJURAO ACTING CNSO I, ANPPDD	 RODERICK D. VEGA DIVISION CHIEF - IV, ANPPDD	 JOSUE R. SIQUI ACTING DEPARTMENT MANAGER III, ANPPDD	 LEANDRO R. VARQUEZ DEPARTMENT MANAGER III, ANPPDD	 GARY M. JADIE ACTING CHIEF, AIR NAVIGATION SERVICE	 CAPT. MANUE ANTONIO L. TAMAYO DIRECTOR GENERAL	01/05 DATE: 08 AUGUST 2024



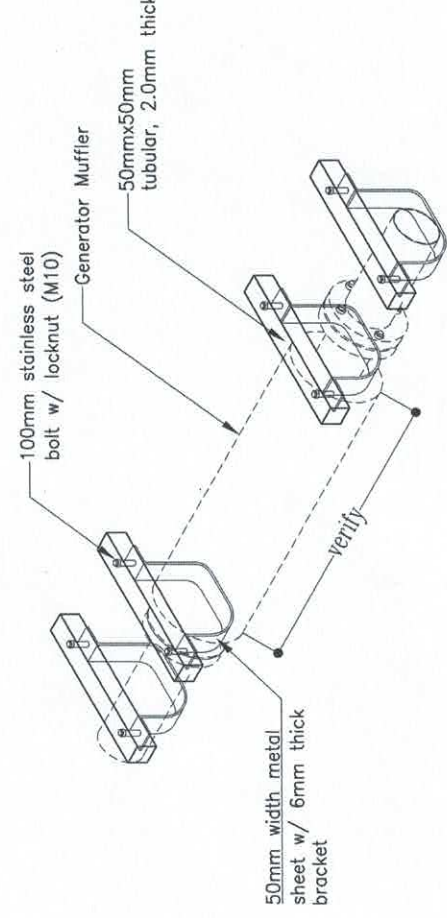
SECTION "A" - "A"



EXHAUST MUFFLER BRACKET
SCALE: 1:20 MTS



SECTION "B" - "B"



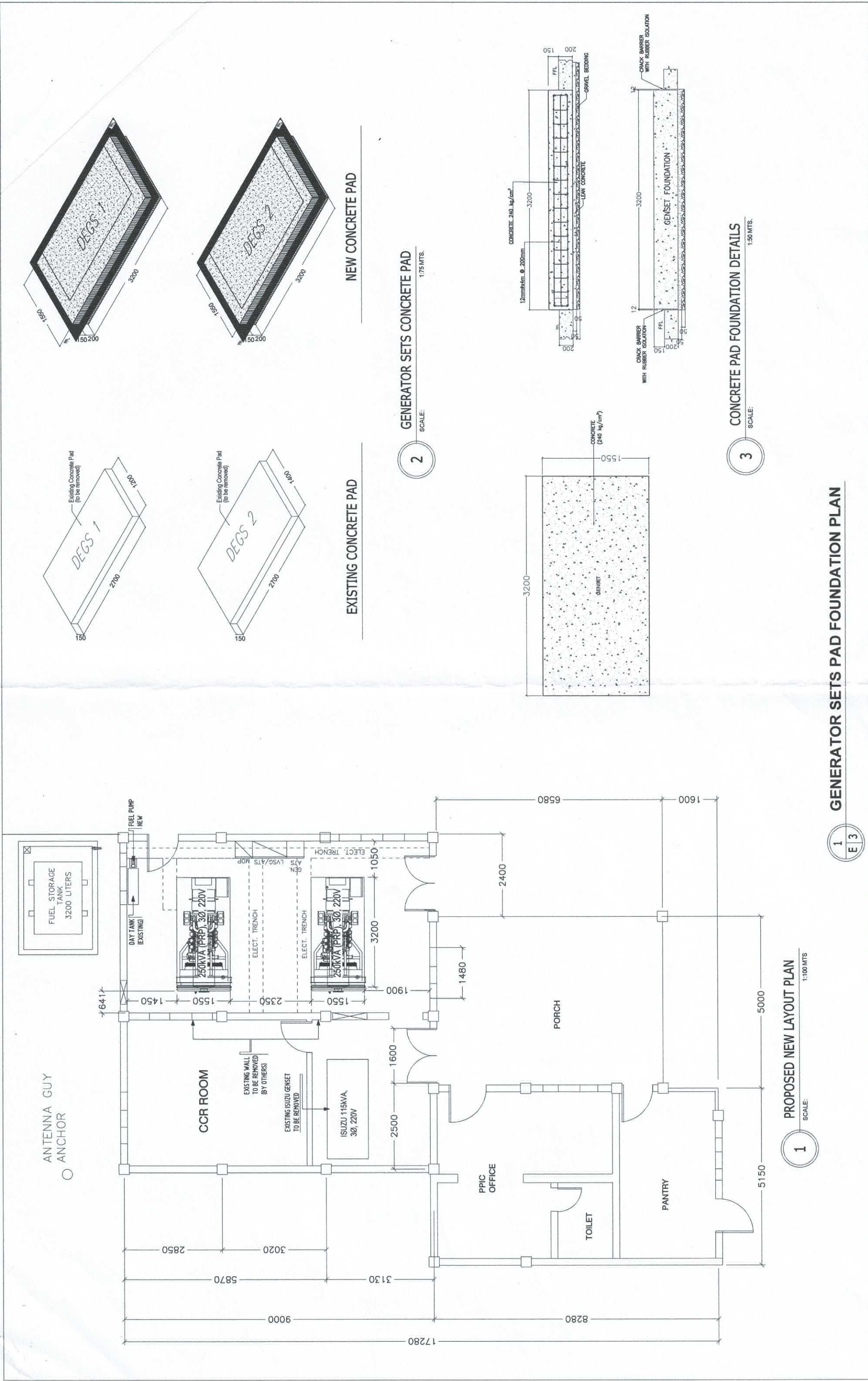
INSTALLATION DETAILS
SCALE: 1:20 MTS

GENERATOR LAYOUT SECTION

SCALE: 1:50 MTS



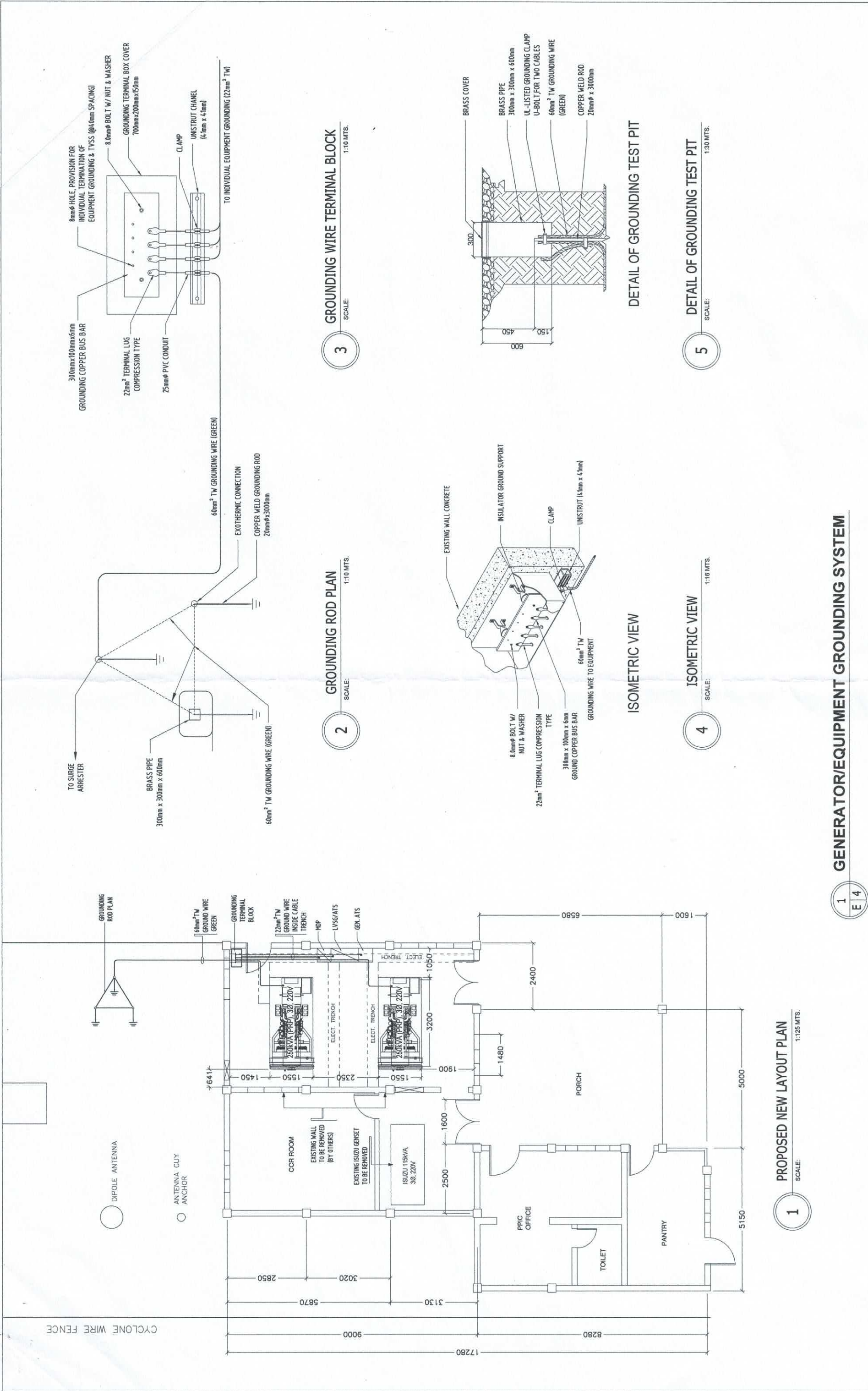
CIVIL AVIATION AUTHORITY OF THE PHILIPPINES	TITLE:	PREPARED BY:	CHECKED BY:	REVIEWED BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:	SHEET NO.:
 AIR NAVIGATION SERVICE	PURCHASE/INSTALLATION OF DIESEL ENGINE GENERATOR SET (DEGS) AT ZAMBOANGA AIRPORT	 ERNEE C. CAJURAO ACTING CNSO I, ANPPD	 RODERICK D. VEGA DIVISION CHIEF JR, ANPPD	 JOSUE P. SANGUI ACTING DEPARTMENT MANAGER III, ANPPD	 LEANDROR. VARQUEZ DEPARTMENT MANAGER III, ANPPD	 GARY M. JADIE ACTING CHIEF, AIR NAVIGATION SERVICE	 CAPT. MANUEL ANTONIO L. TAMAYO DIRECTOR GENERAL	02/05 DATE: 08 AUGUST 2024



GENERATOR SETS PAD FOUNDATION PLAN

CIVIL AVIATION AUTHORITY OF THE PHILIPPINES	TITLE:	PURCHASE/INSTALLATION OF DIESEL ENGINE GENERATOR SET (DEGS) AT ZAMBOANGA AIRPORT	PREPARED BY:	ERNEE C. CAJURAO ACTING CHSSO I, ANPPDD	CHECKED BY:	RODERICK D. VEGA DIVISION CHIEF-III, ANPPDD	REVIEWED BY:	JOSUE R. SUGUI ACTING DEPARTMENT MANAGER III, ANPPDD	SUBMITTED BY:	LEANDRO R. VARQUEZ DEPARTMENT MANAGER III, ANPPDD	RECOMMENDING APPROVAL:	GARY M. JADIE ACTING CHIEF, AIR NAVIGATION SERVICE	APPROVED BY:	CAPT. MANUEL ANTONIO L. TAMAYO DIRECTOR GENERAL	SHEET NO.:	03/05
															DATE:	08 AUGUST 2024





1 GENERATOR/EQUIPMENT GROUNDING SYSTEM

CIVIL AVIATION AUTHORITY OF THE PHILIPPINES	TITLE: PURCHASE/INSTALLATION OF DIESEL ENGINE GENERATOR SET (DEGS) AT ZAMBOANGA AIRPORT	PREPARED BY: ERNEE C. CAJURAO ACTING CNSO I, ANPPDD	CHECKED BY: RODERICK D. VEGA DIVISION CHIEF III, ANPPDD	REVIEWED BY: JORGE R. SUGUI ACTING DEPARTMENT MANAGER III, ANPPDD	SUBMITTED BY: LEANDRO R. VARQUEZ DEPARTMENT MANAGER III, ANPPDD	RECOMMENDING APPROVAL: GARY M. JADIE ACTING CHIEF, AIR NAVIGATION SERVICE	APPROVED BY: CAPT. MANUEL ANTONIO L. TAMAYO DIRECTOR GENERAL	SHEET NO.: 04/05 DATE: 08 AUGUST 2024
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SCHEDULE OF LOADS

CKT. NO.	LOAD DESCRIPTION	TOTAL VA	SYSTEM VOLTAGE (V)	AMPERE LOAD			3Ø	CONDUCTOR	CONDUIT	SETTING OF OVER CURRENT DEVICE			REMARKS
				AB	BC	CA				AT	AF	P	
1	CONTROL TOWER	25,000	220				65.6	3 - 80mm ² (Existing)	-	150	250	3	EXISTING CONDUCTOR & CONDUITS TO BE USED
2	CCR ROOM	85,000	220				223.0	3-125mm ² THHN / THWN-2, 600V	-	250	250	3	EXISTING CONDUITS TO BE USED, NEW CONDUCTORS
3	FSS FACILITY DP	23,000	220				60.4	3 - 30mm ² (Existing)	-	100	250	3	EXISTING CONDUCTOR & CONDUITS TO BE USED
4	FSS EQUIPMENT	14,400	220				37.8	3 - 22mm ² (Existing)	-	60	100	3	EXISTING CONDUCTOR & CONDUITS TO BE USED
5	SPARE	15,000	220				39.4	-	-	60	100	3	-
6	POWERPLANT OFFICE	7,000	220			31.2		2 - 14mm ² (Existing)	-	60	100	2	EXISTING CONDUCTOR & CONDUITS TO BE USED
7	DVOR	10,000	220				45.5	2 - 30mm ² (Existing)	-	100	100	2	EXISTING CONDUCTOR & CONDUITS TO BE USED
8	SPACE	-	-	-	-	-	-	-	-	-	-	-	-
9	SPARE	1,800	220	8.2				-	-	30	50	2	EXISTING CONDUCTOR & CONDUITS TO BE USED
10	SPARE	1,800	220	8.2				-	-	30	50	2	EXISTING CONDUCTOR & CONDUITS TO BE USED
TOTAL		183,000	220	16.4	31.2	45.5	413.0	-	-				
MAIN CIRCUIT BREAKER													
MAIN FEEDER													
3-SET OF 3C-150mm ² THHN / THWN-2, 600V + 50mm ² TW (E)													
EXISTING ELECTRICAL TRENCH TO BE USED													

MINIMUM FEEDER AMPACITY:

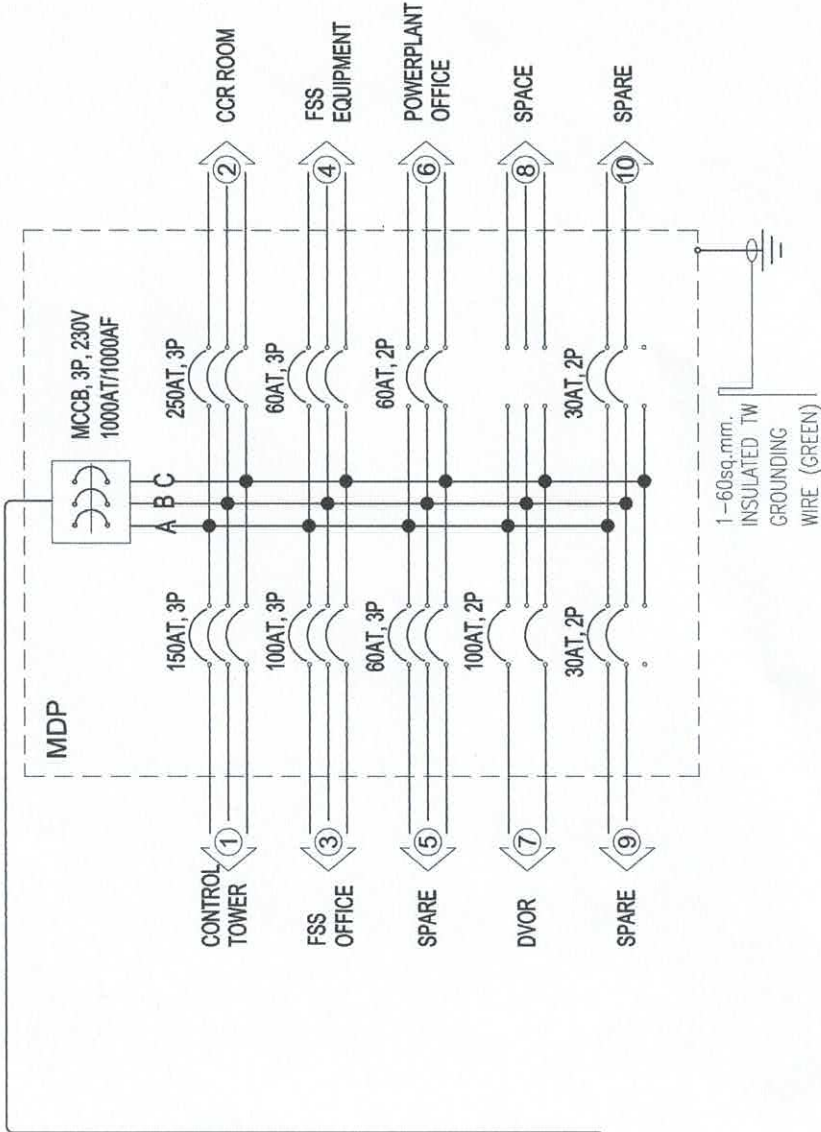
$$I_c = \frac{(Total VA \times DF) + (25\% \text{ of HMR})}{(\sqrt{3} \times 220V)} + I_{3\phi}$$
$$I_c = \frac{(183,000 \times 0.8) + (25\% \times 0) + 413 A}{(\sqrt{3} \times 220V)}$$

$I_c = 797.2 A$

MAIN CIRCUIT BREAKER RATING:

$$= \frac{(Total VA \times HMR) \times DF}{(\sqrt{3} \times 220V)} + I_{3\phi}$$

$I_{cb} = 797.2 A$



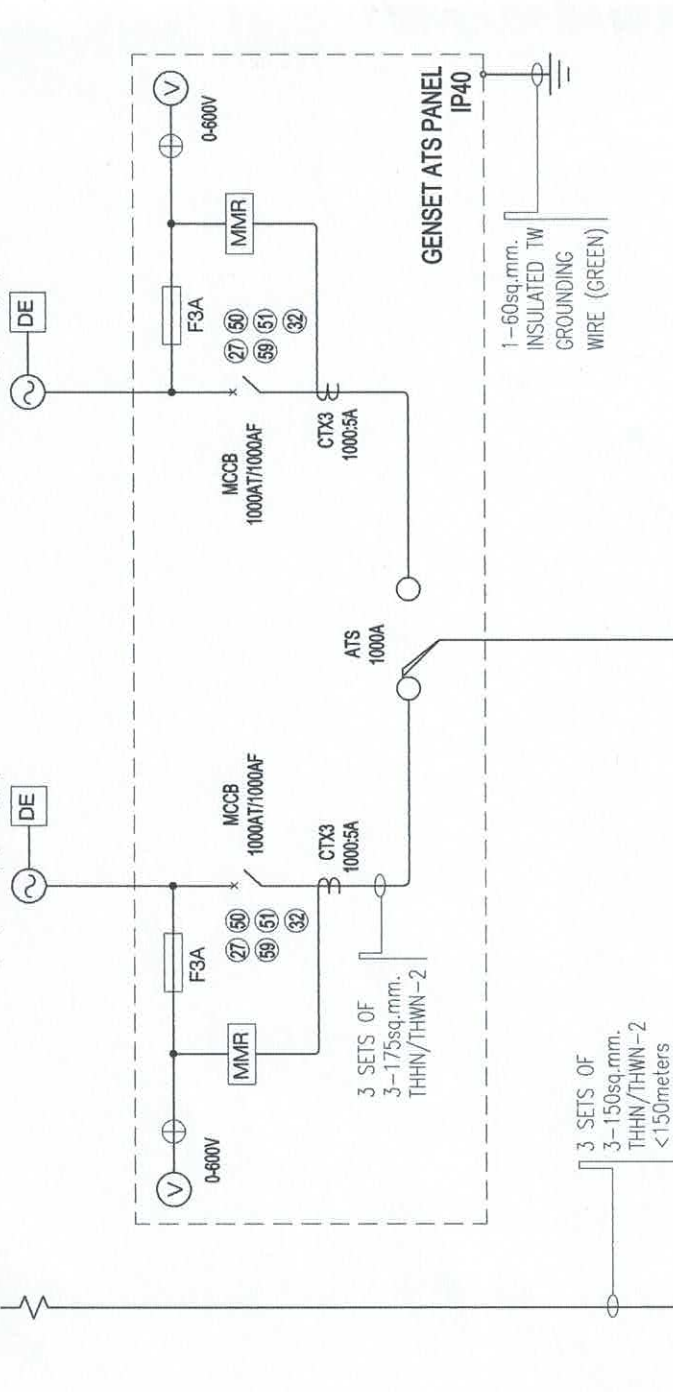
POWER SINGLE LINE DIAGRAM

SCALE: 1/5 NTS

ZAMCELCO
COMMERCIAL POWER
220V, 3Ø, 60Hz

(NEW GENSET)
G1
250kVA, 200kW, PRP, 220V/127V,
3Ø, 4P, 60Hz (Open Type)

(NEW GENSET)
G2
250kVA, 200kW, PRP, 220V/127V,
3Ø, 4P, 60Hz (Open Type)



PURCHASE/INSTALLATION OF DIESEL
ENGINE GENERATOR SET (DEGS) AT
ZAMBOANGA AIRPORT

ERNEE C. CAJURAO
ACTING CHIEF I, ANPPD

RODERICK D. VEGA
DIVISION CHIEF III, ANPPD

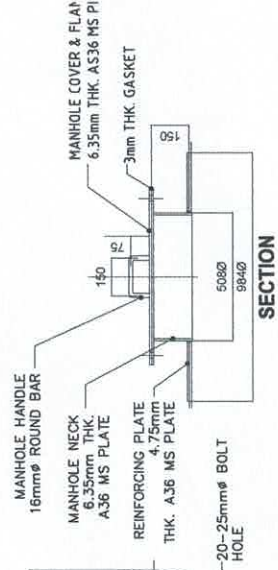
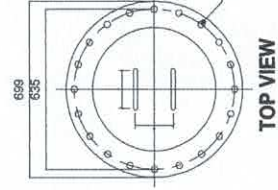
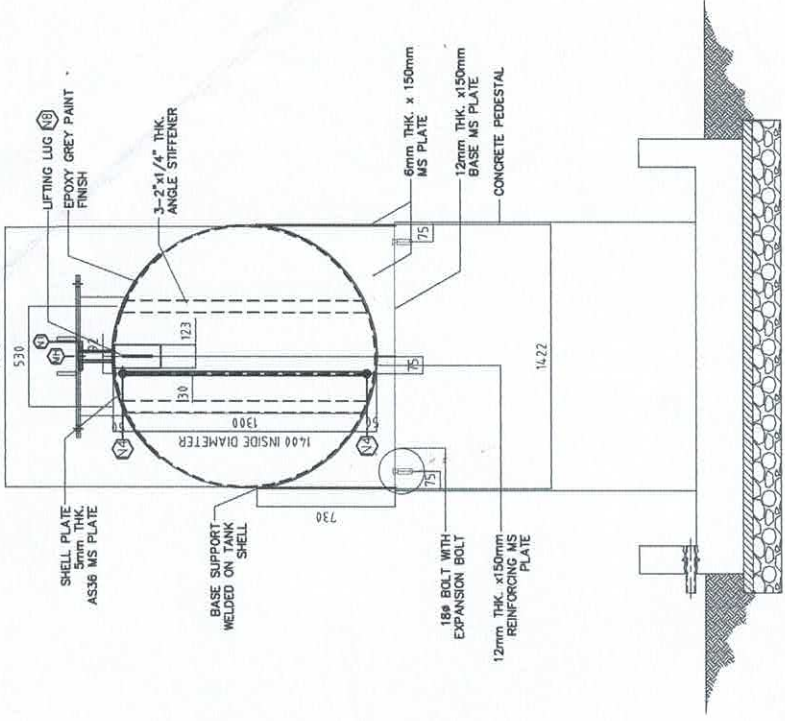
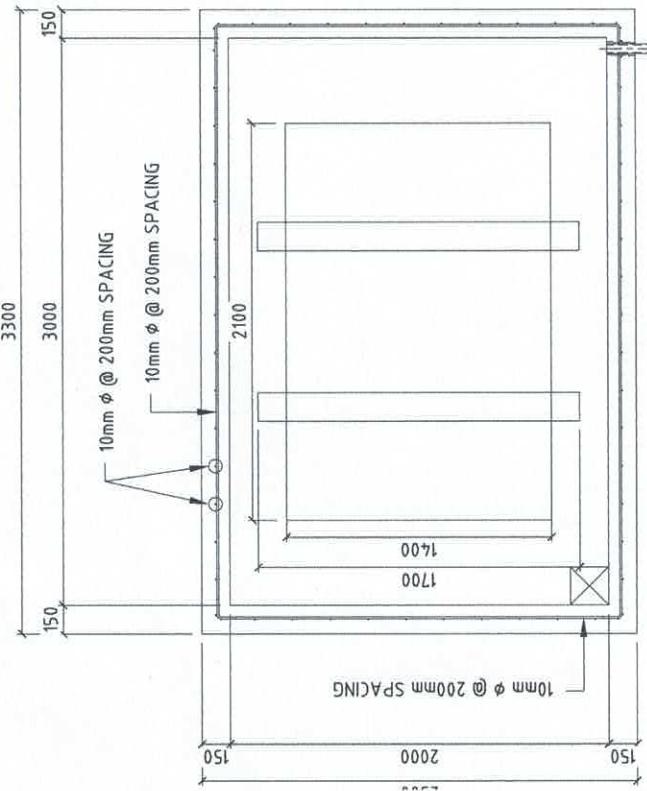
JOSUE R. SINGUI
ACTING DEPARTMENT MANAGER III,
ANPPD

LEANDRO R. VARQUEZ
DEPARTMENT MANAGER III, ANPPD

GARY M. JADIE
ACTING CHIEF,
AIR NAVIGATION SERVICE

CAPT. MANUEL ANTONIO L. TAMAYO
DIRECTOR GENERAL

SHEET NO.:
05/05
DATE:
08 AUGUST 2024

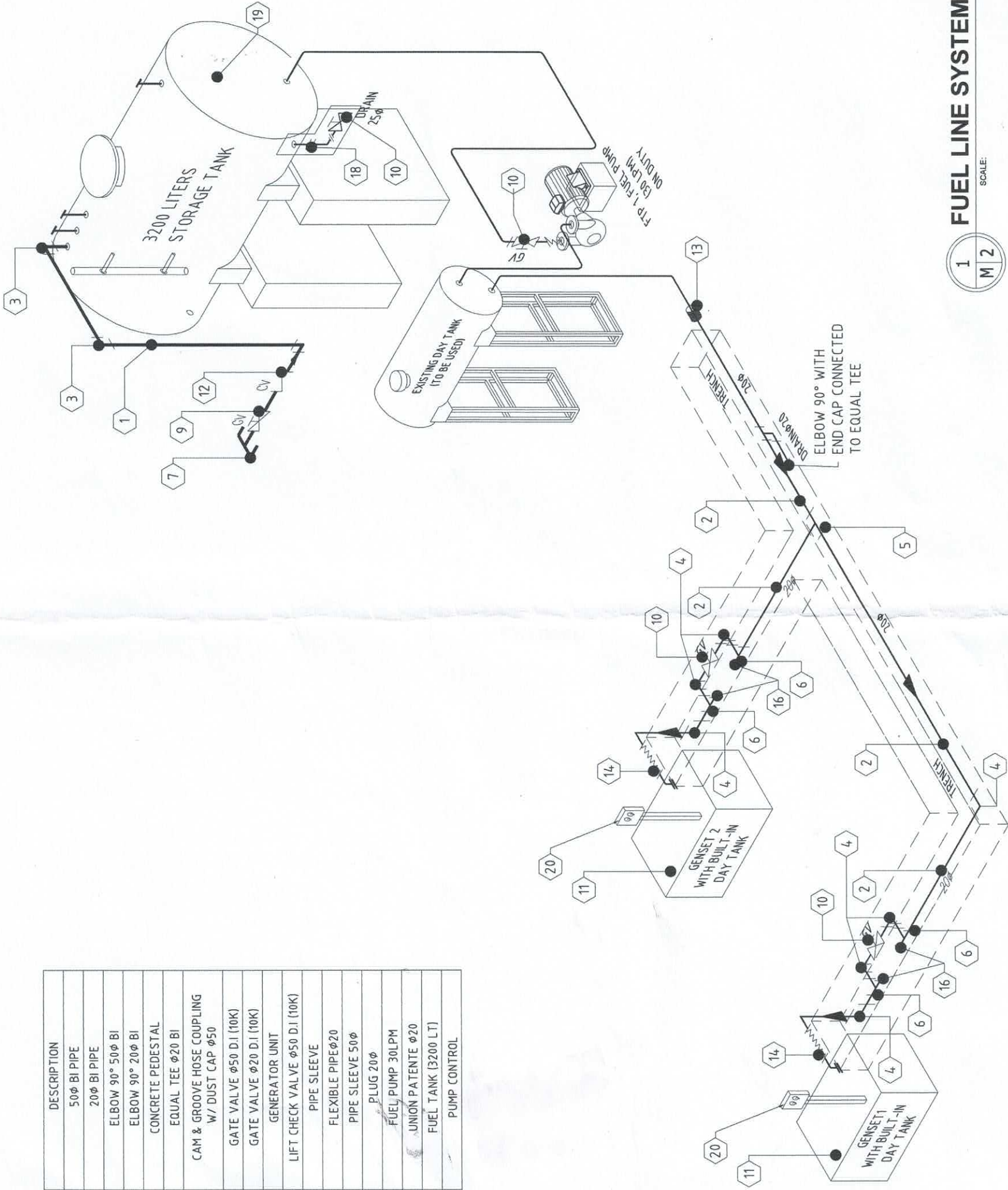


NOZZLE DETAILS			
MARK	QTY.	SERVICE	SIZE
MH	1	MANHOLE	20"Ø FABRICATED FLANGE
N1	1	INLET	2" SORF 150#
N2	1	OUTLET/NOZZLE	1" SORF 150#
N3	1	VENT	2" SORF 150#
N4	2	SIGHT GLASS	1/2" HALF COUPLING
N5	1	DRAIN	1" SORF 150#
N6	1	SOUNDING LINE	2" SORF 150#
N7	1	RETURN NOZZLE	1" SORF 150#
N8	1	LIFTING LUG	



CIVIL AVIATION AUTHORITY OF THE PHILIPPINES	TITLE:	PREPARED BY:	CHECKED BY:	REVIEWED BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:	SHEET NO.:
 AIR NAVIGATION SERVICE	PURCHASE/INSTALLATION OF DIESEL ENGINE GENERATOR SET (DEGS) AT ZAMBOANGA AIRPORT	ERNEE C. CAJURAO ACTING CNSO I, ANPPDD	RODRICK D. YEGA DIVISION CHIEF III, ANPPDD	JOSUE A. SUGUI ACTING DEPARTMENT MANAGER III, ANQMD	LEANDRO R. VARQUEZ DEPARTMENT MANAGER III, ANPPDD	 GARY M. JADIE ACTING CHIEF, AIR NAVIGATION SERVICE	 CAPT. MANUEL ANTONIO L. TAMAYO DIRECTOR GENERAL	M1/M2 DATE: 08 AUGUST 2024

ITEM NO.	DESCRIPTION
1	50ø BI PIPE
2	20ø BI PIPE
3	ELBOW 90° 50ø BI
4	ELBOW 90° 20ø BI
5	CONCRETE PEDESTAL
6	EQUAL TEE ø20 BI
7	CAM & GROOVE HOSE COUPLING W/ DUST CAP ø50
9	GATE VALVE ø50 D.I (10K)
10	GATE VALVE ø20 D.I (10K)
11	GENERATOR UNIT
12	LIFT CHECK VALVE ø50 D.I (10K)
13	PIPE SLEEVE
14	FLEXIBLE PIPE ø20
15	PIPE SLEEVE 50ø
16	PLUG 20ø
17	FUEL PUMP 30LPM
18	UNION PATENTE ø20
19	FUEL TANK (3200 LT)
20	PUMP CONTROL



FUEL LINE SYSTEM ISOMETRY

1:40MTS

1
M 2

CIVIL AVIATION AUTHORITY OF THE PHILIPPINES	TITLE:	PREPARED BY:	CHECKED BY:	REVIEWED BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:	SHEET NO.:
	PURCHASE/INSTALLATION OF DIESEL ENGINE GENERATOR SET (DEGS) AT ZAMBOANGA AIRPORT	ERNEE C. CAJURAO ACTING CNSSO I, ANPPDD	RODERICK D. VEGA DIVISION CHIEF III, ANPPDD	JOSE P. SUGUI ACTING DEPARTMENT MANAGER III, ANPPDD	LEANDRO R. VARQUEZ DEPARTMENT MANAGER III, ANPPDD	GARY M. JADIE ACTING CHIEF, AIR NAVIGATION SERVICE	CAPT. MANUEL ANTONIO L. TAMAYO DIRECTOR GENERAL	M2/M2
								DATE: 08 AUGUST 2024