

GENERAL NOTES

1. ALL ELECTRICAL WORKS SHALL COMPLY IN ACCORDANCE W/ THIS PLAN & SPECIFICATION THE APPLICABLE PROVISIONS OF THE LATEST EDITION OF THE PHILLIPINE ELECTRICAL CODE (PEC) AND THE RULES AND REGULATION OF THE LOCAL POWER COMPANY. ALL ELECTRICAL WORKS SHALL BE UNDER THE IMMEDIATE SUPERVISION OF A DULY REGISTER ELECTRICAL ENGINEER
2. THE ELECTRICAL SERVICE POWER IS 3-PHASE 3-WIRE,230 VOLTS AC. 60 H2
3. WIRING METHOD SHALL BE AS FOLLOWS :

A. FEEDERS AND RISERS - RIGID STEEL CONDUIT

B. LIGHTING POWER RECEPTACLE - POLYVINYL CHLORIDE CONDUIT BRANCH CKT. & AUXLIARY SCHEDULE 40
4. ALL WIRE SHALL BE COPPER AND THERMOPLASTIC INSULATED TYPE "THHN" UNLESS OTHERWISE INDICATED IN THE PLAN. THE MIN. SIZE OF WIRE FOR POWER & LIGHTING CIRCUIT HOMERUN SHALL BE 3.5mm AND 600 V SMALLEST RACEWAY SHALL BE 20mm Ø TRADE NOMINAL SIZE
5. ALL OUTLET BOXES SHALL BE PVC GAUGE 16 DEEP TYPE W/ FACTORY KNOCKOUTS.
6. ALL MATERIALS TO BE USED SHALL BE NEW AND OF APPROVED TYPE FOR THE PARTICULAR LOCATION
7. GROUNDING SYSTEM SHALL BE PROVIDED TO ALL LIGHTING & POWER CIRCUIT AS PER PHILLIPPINE ELECTRICAL CODE REQUIREMENTS. AND IT SHALL HAVE A GROUNDING RESISTANCE NOT EXCEEDING 5 OHMS.
8. UNDERGROUND CONDUIT SHALL BE BURIED 600mm BELOW FINISHED GRADE LINE AND SHALL BE ENCASED IN 20.69 MPa CONCRETE AT A MINIMUM 76mm THICKNESS ALL AROUND.
9. MOUNTING SYSTEM OF WIRING DEVICES SHALL BE AS FOLLOWS :

A. LIGHTING SWITCH - 1.40 M. ABOVE FINISH FLOOR

B. CONVENIENCE OUTLET - 0.30 M. ABOVE FINISH FLOOR

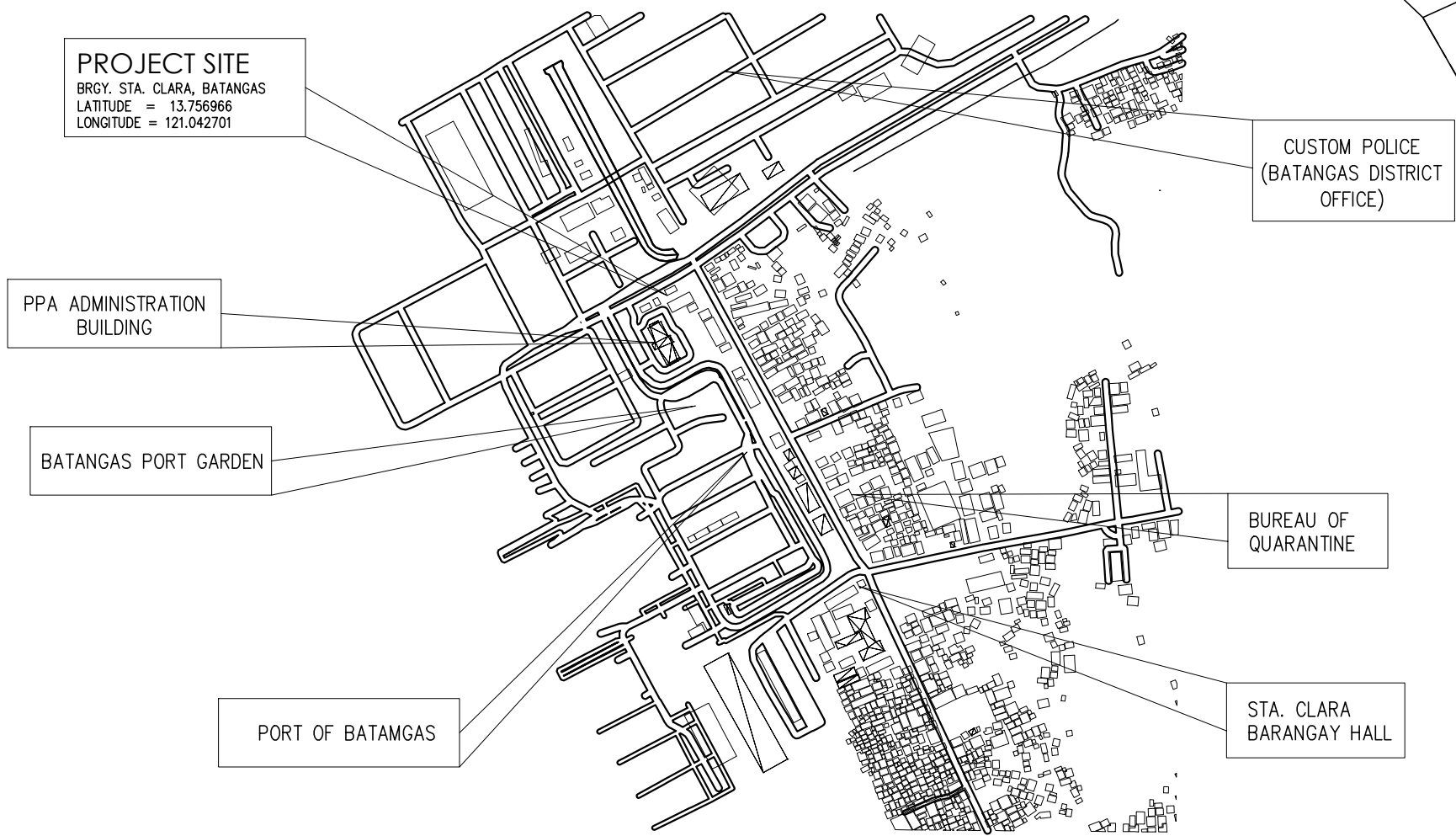
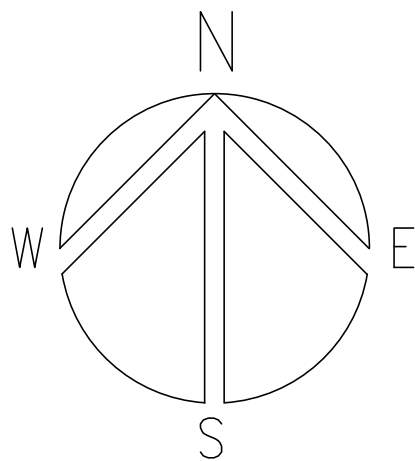
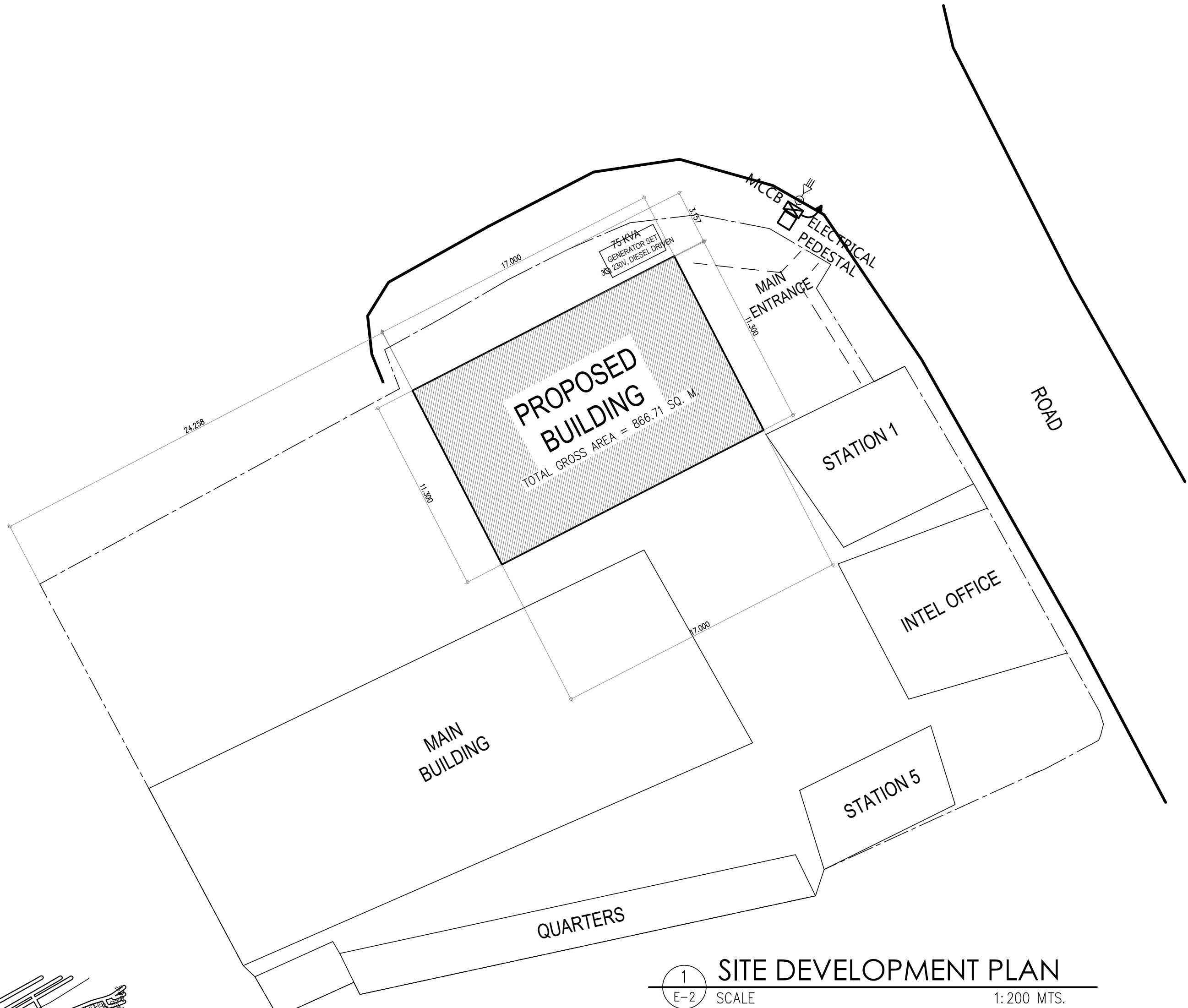
C. SAFETY SWITCH - 1.80 M. ABOVE FINISH FLOOR

D. TELEPHONE AND CATV - 0.30 M. ABOVE FINISH FLOOR

E. WALL LAMP - 2.0 M ABOVE FINISH FLOOR

F. PB - 2.5 M ABOVE FINISH FLOOR

G. EL OUTLET - 0.5 M BELOW CEILING LINE



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DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
REGIONAL OFFICE No. IV-A
BATANGAS 2ND DISTRICT ENGINEERING OFFICE
KUMINTANG ILAYA, BATANGAS CITY

PROJECT TITLE / LOCATION :

CY 2025 PROJECT
CONVERGENCE AND SPECIAL SUPPORT PROGRAM,
BASIC INFRASTRUCTURE PROGRAM (BIP),
MULTI-PURPOSE BUILDINGS/FACILITIES TO SUPPORT SOCIAL SERVICES,
CONSTRUCTION/IMPROVEMENT OF MULTI-PURPOSE BUILDINGS
(LIVING QUARTERS) OF PHILIPPINE COAST GUARD SOUTHERN TAGALOG,
BARANGAY STA. CLARA, BATANGAS CITY

DRAWN & PREPARED BY:

JAY M. VIVO
ENGINEER II

DATE :

REVIEWED & SUBMITTED :

GEMMA L. OLAN
CHIEF

PLANNING & DESIGN SECTION

DATE :

RECOMMENDED :

ARIEL V. ARMEDILLA
ASSISTANT DISTRICT ENGINEER

DATE :

APPROVED :

SONIA D. PAGLICAUAN
DISTRICT ENGINEER

DATE :

CHECKED, SIGNED & SEALED BY :

PROFESSIONAL ELECTRICAL ENGINEER

PRC No.

PTR No.

Date Issued:

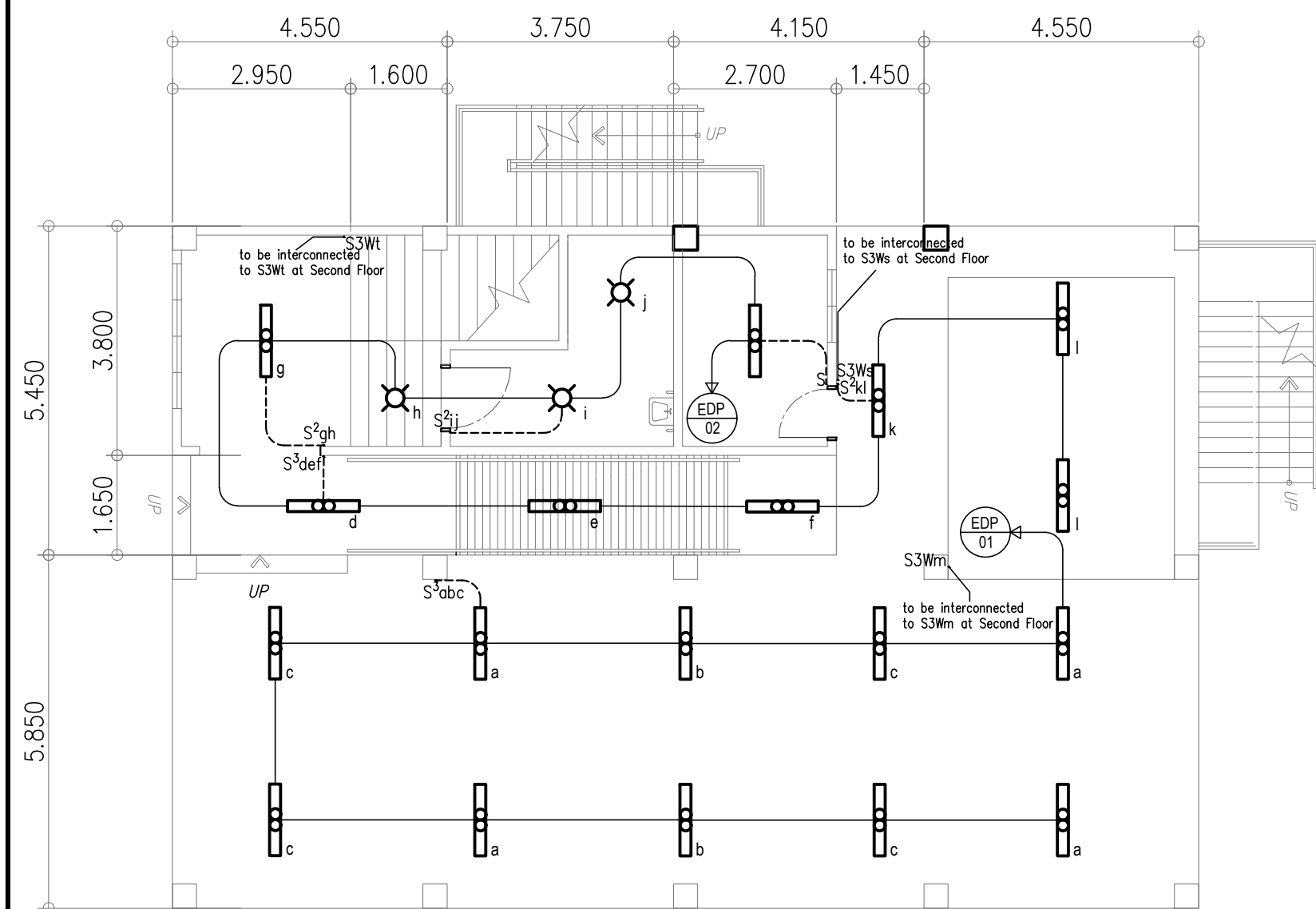
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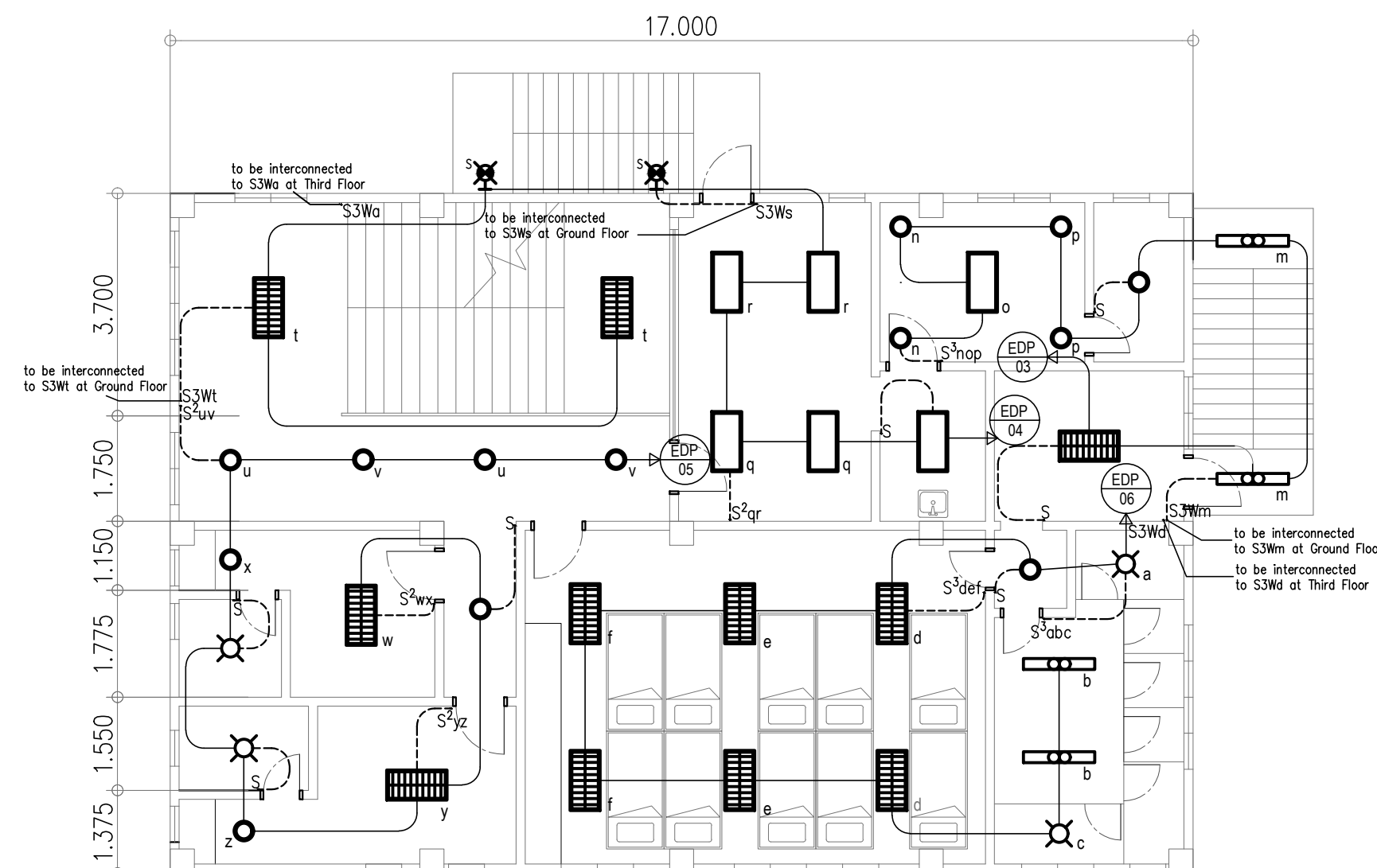
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VICINITY MAP
SITE DEVELOPMENT PLAN
GENERAL NOTES

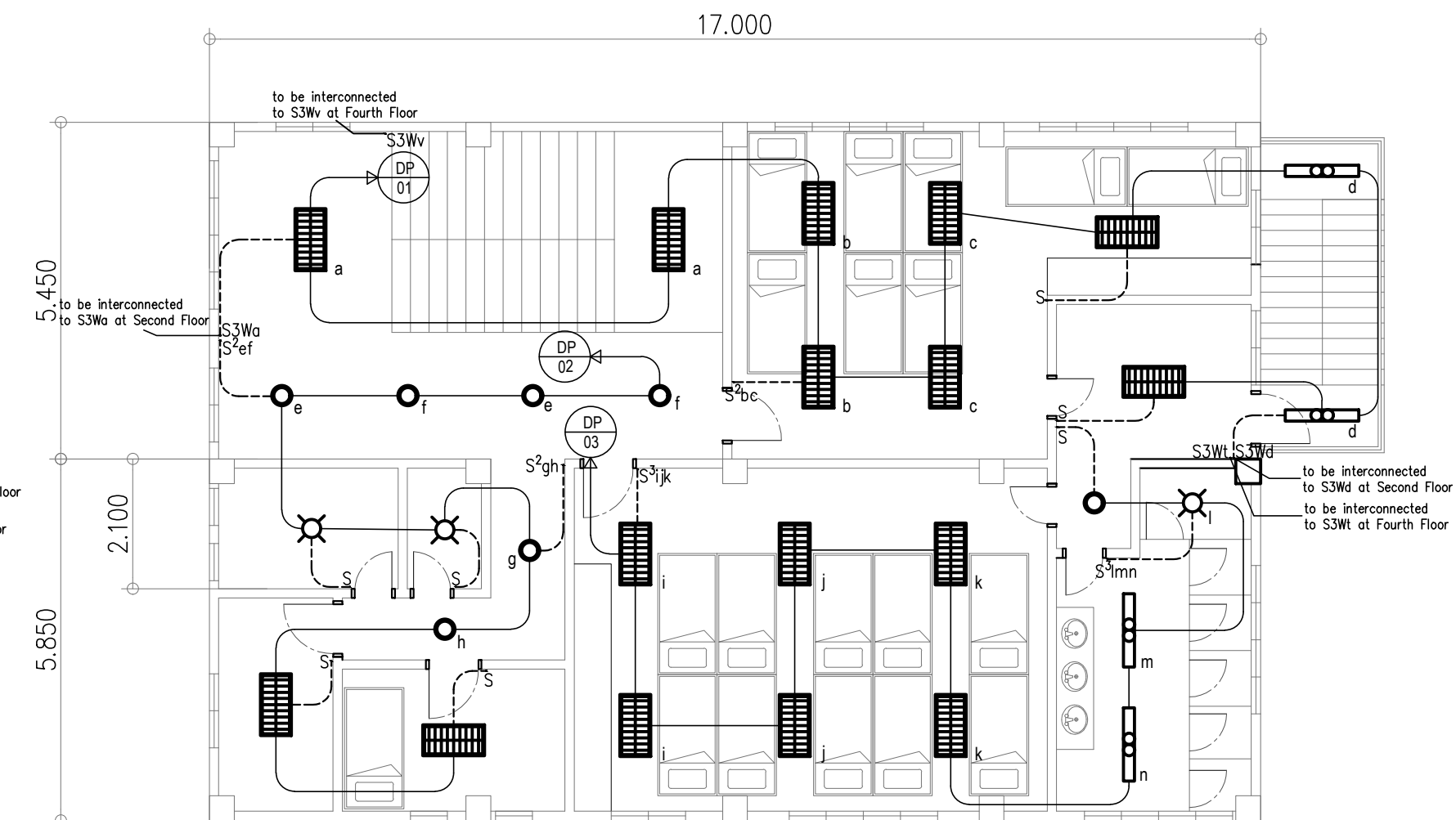
E-01



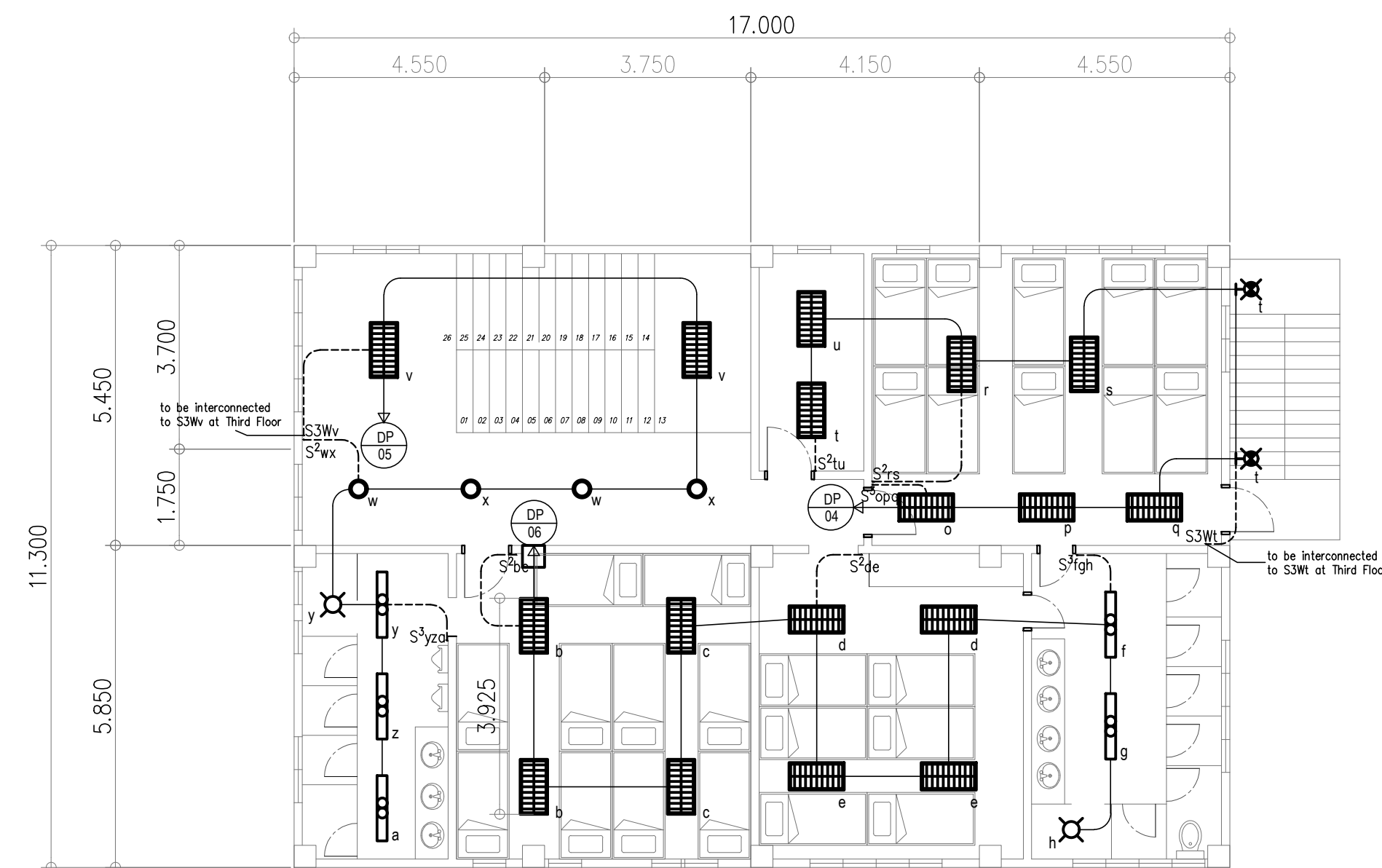
2 GF LIGHTING LAY-OUT
E-3 SCALE 1 : 100 MTS.



2 2F LIGHTING LAY-OUT
E-4 SCALE 1 : 100 MTS.

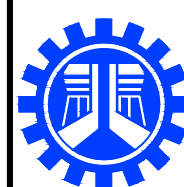


2 3F LIGHTING LAY-OUT
E-5 SCALE 1 : 100 MTS.



2 4F LIGHTING LAY-OUT
E-6 SCALE 1 : 100 MTS.

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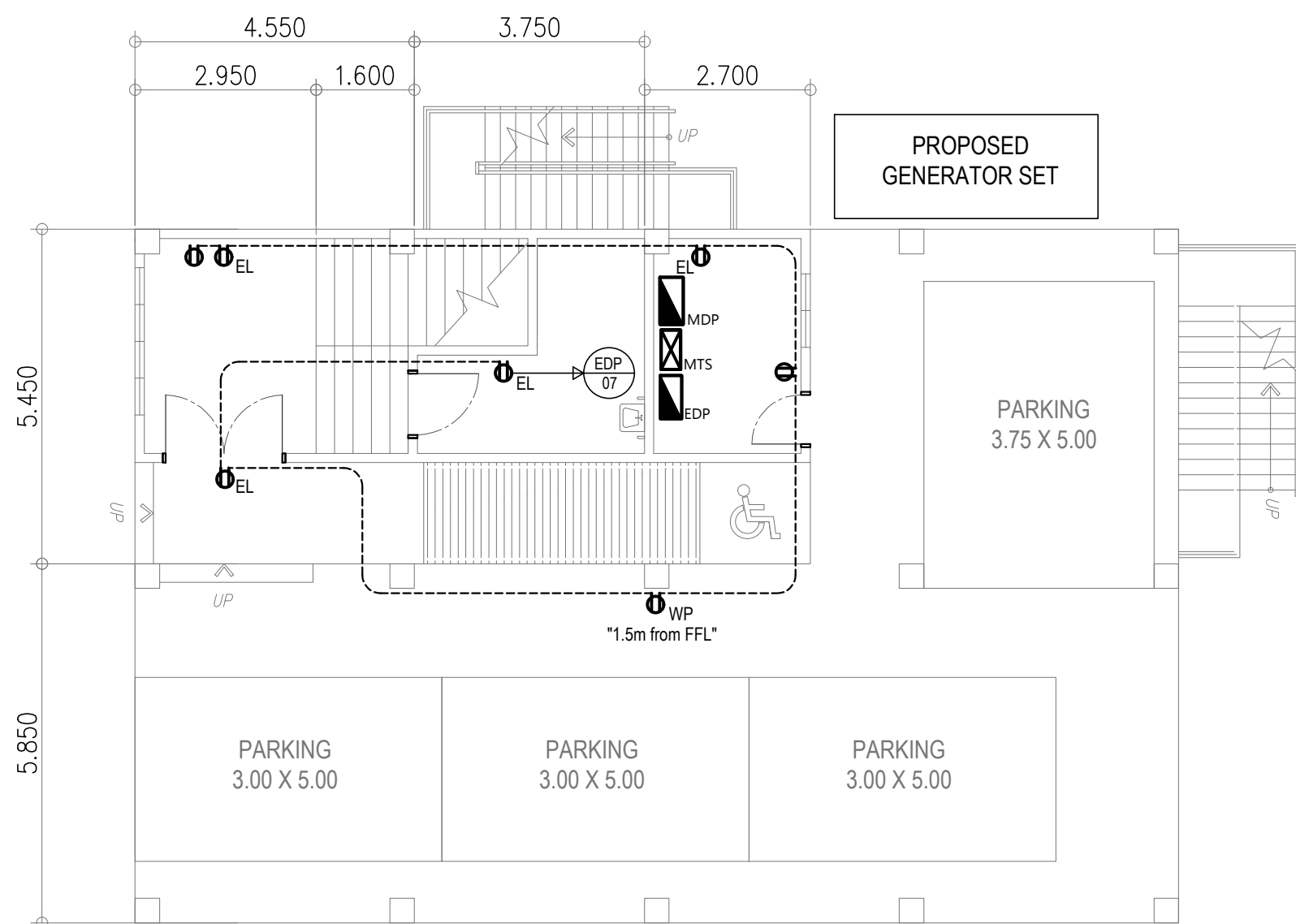
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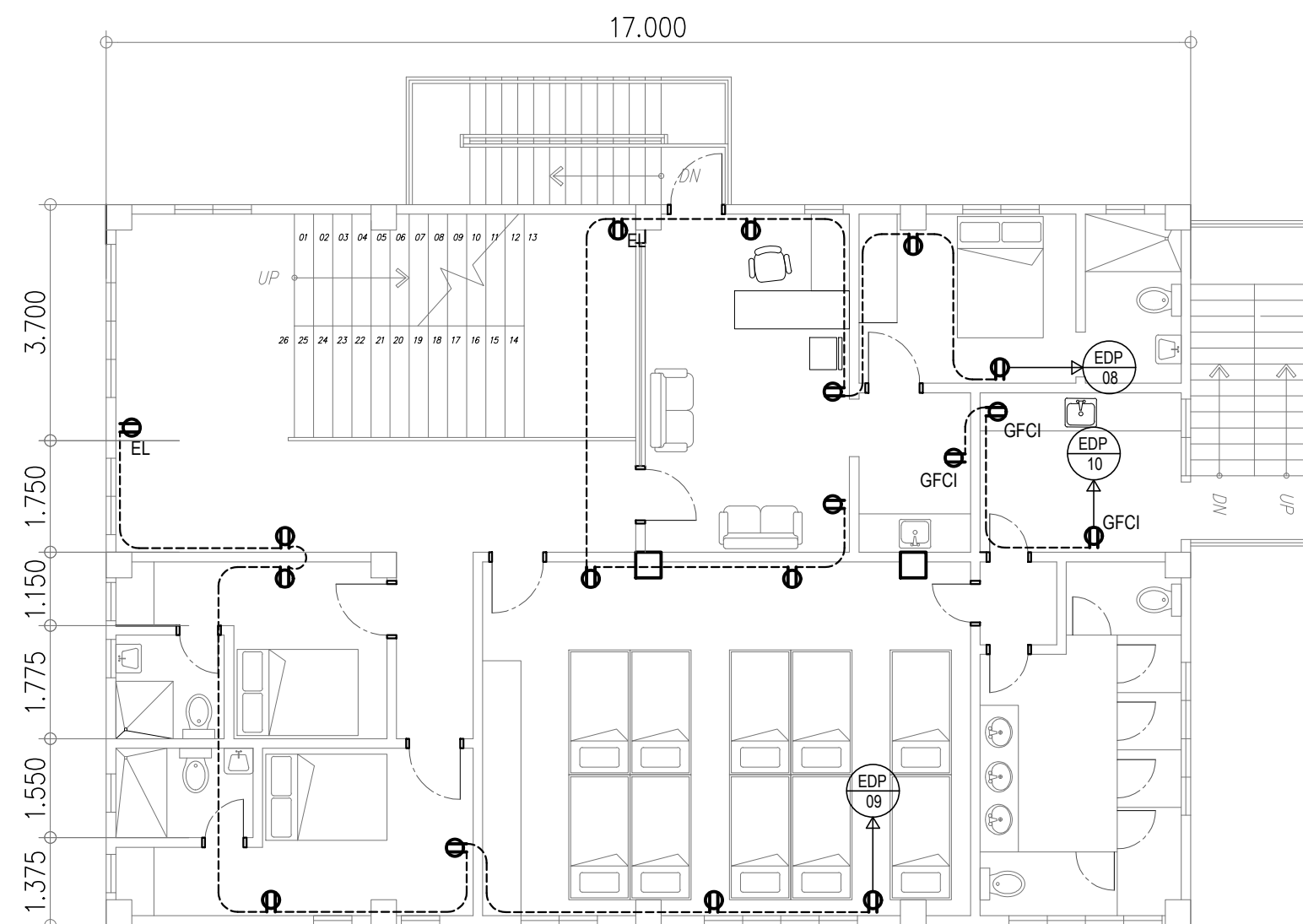
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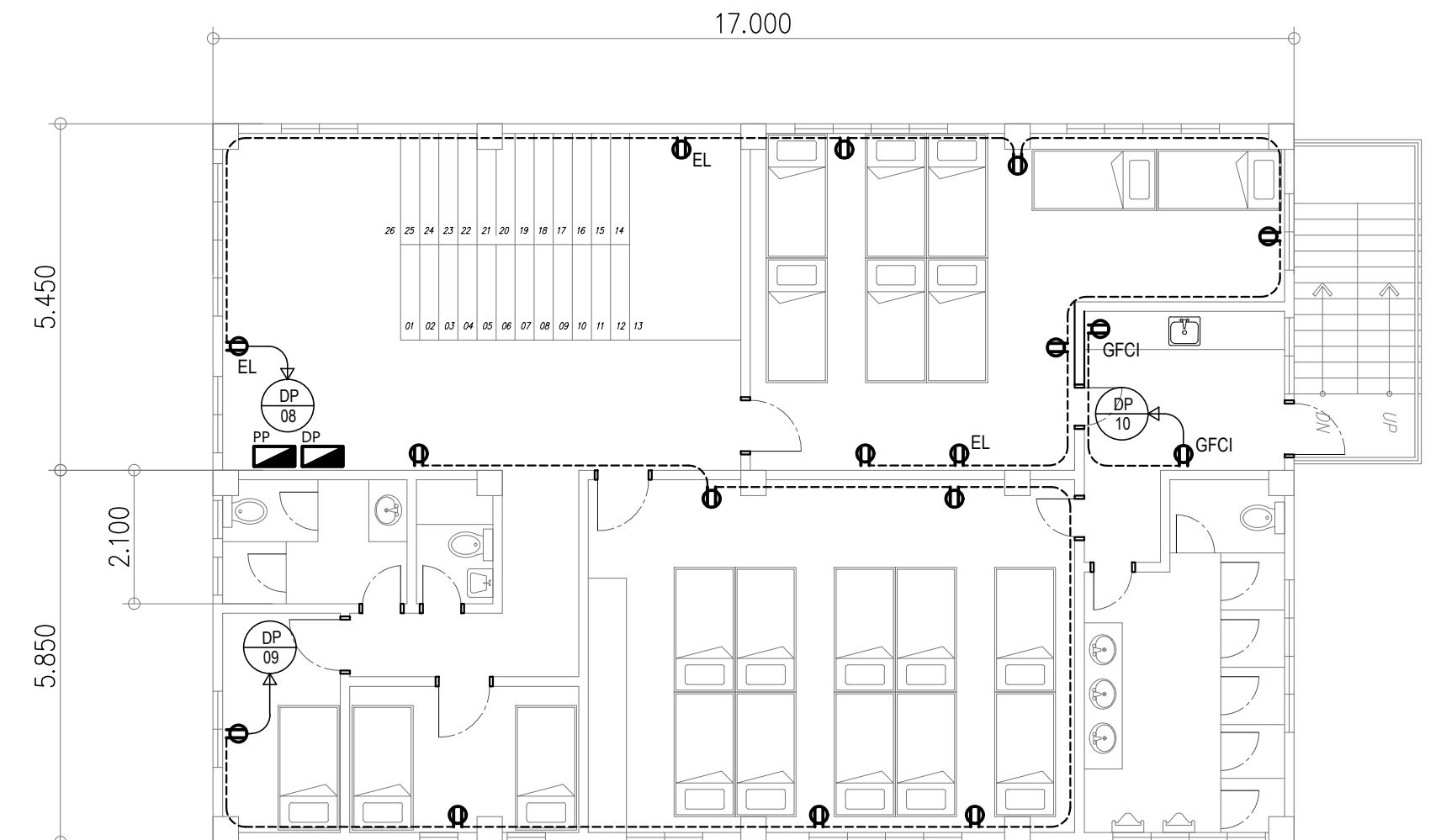
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LIGHTING LAYOUT
SHEET NO.:
E-02



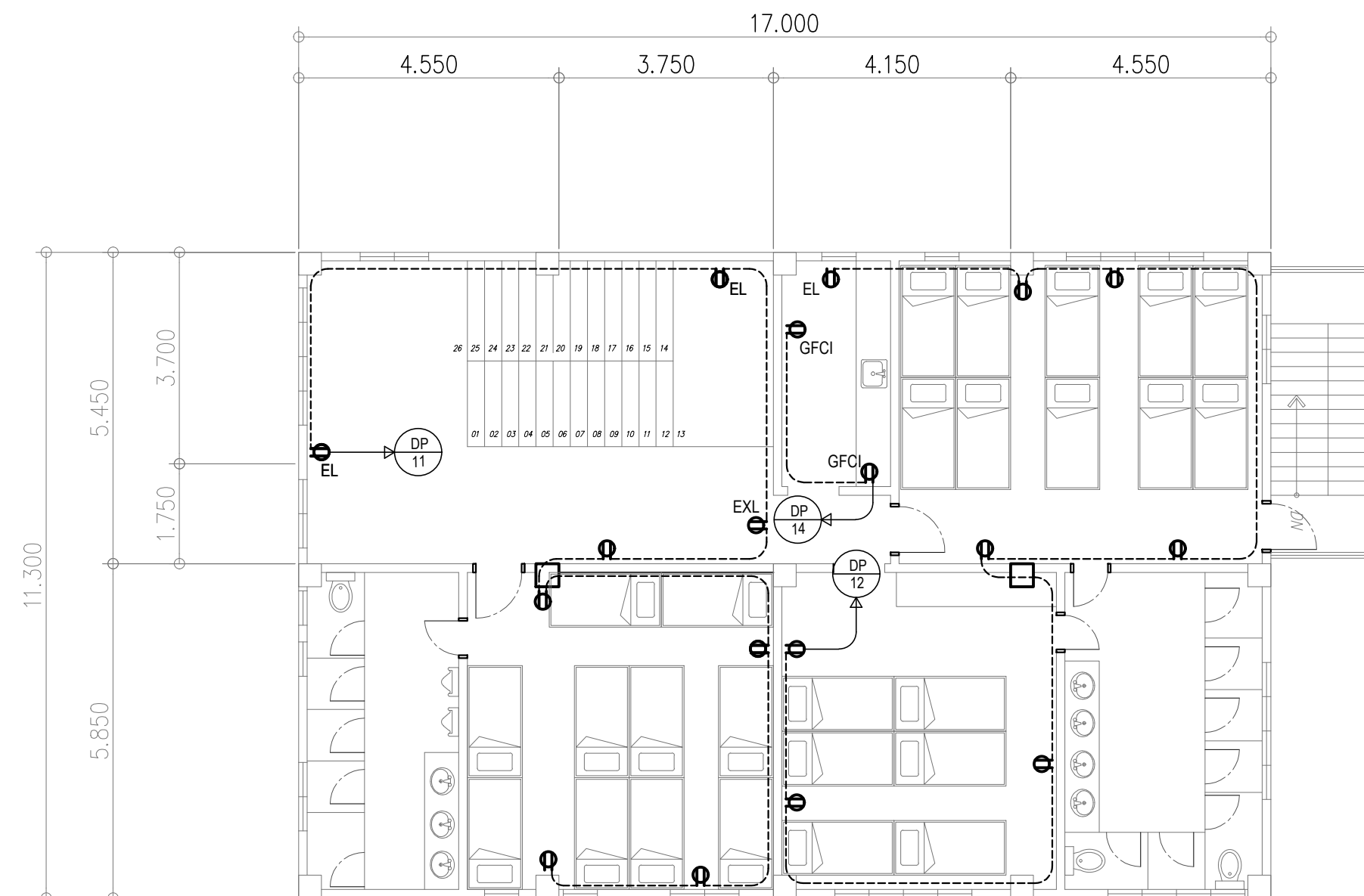
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E-7
GF POWER LAY-OUT
SCALE 1 : 100 MTS.



3
E-8
2F POWER LAY-OUT
SCALE 1 : 100 MTS.

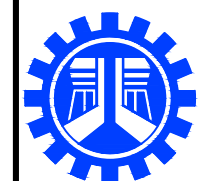


3
E-9
3F POWER LAY-OUT
SCALE 1 : 100 MTS.



3
E-10
4F POWER LAY-OUT
SCALE 1 : 100 MTS.

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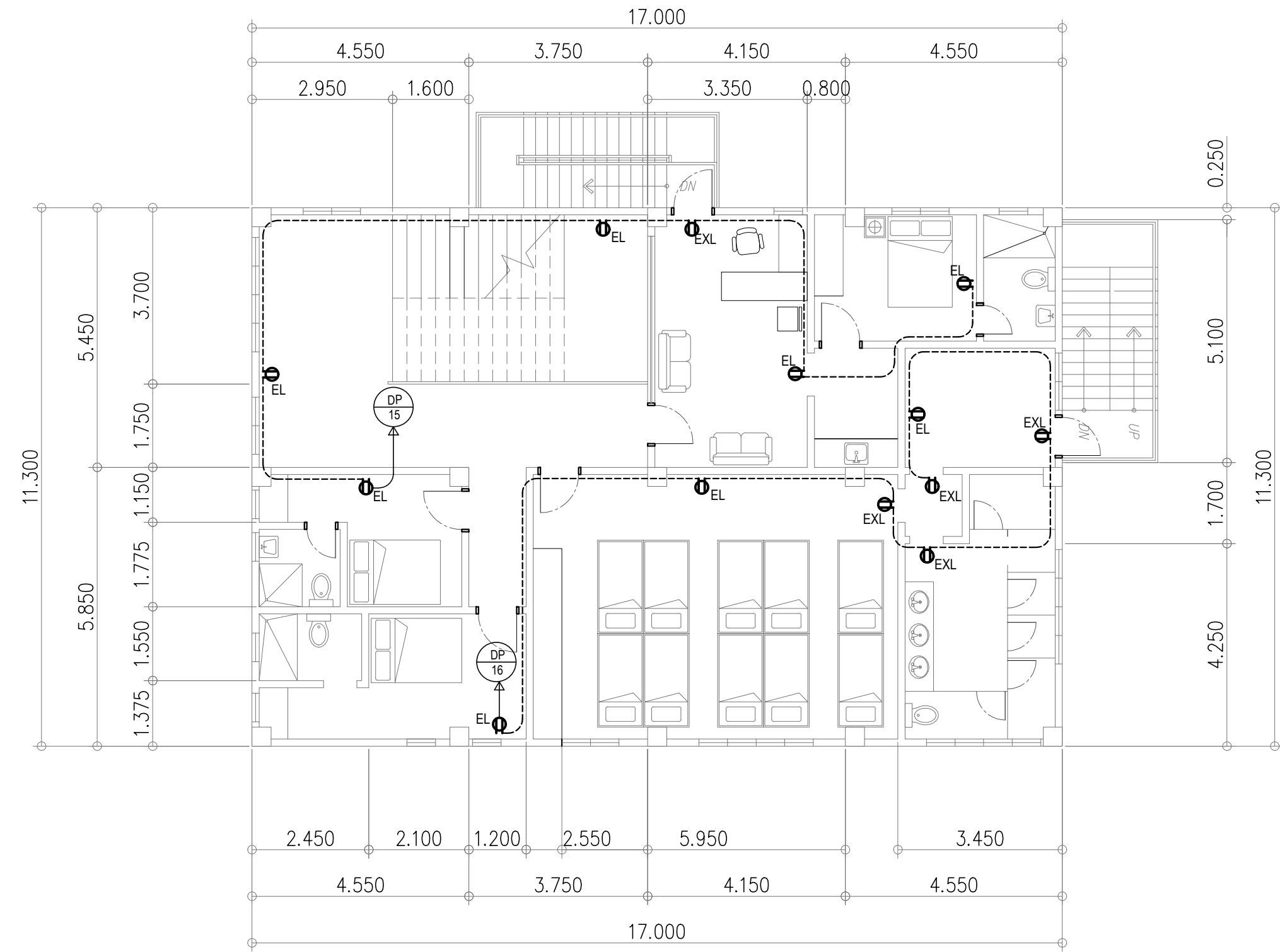
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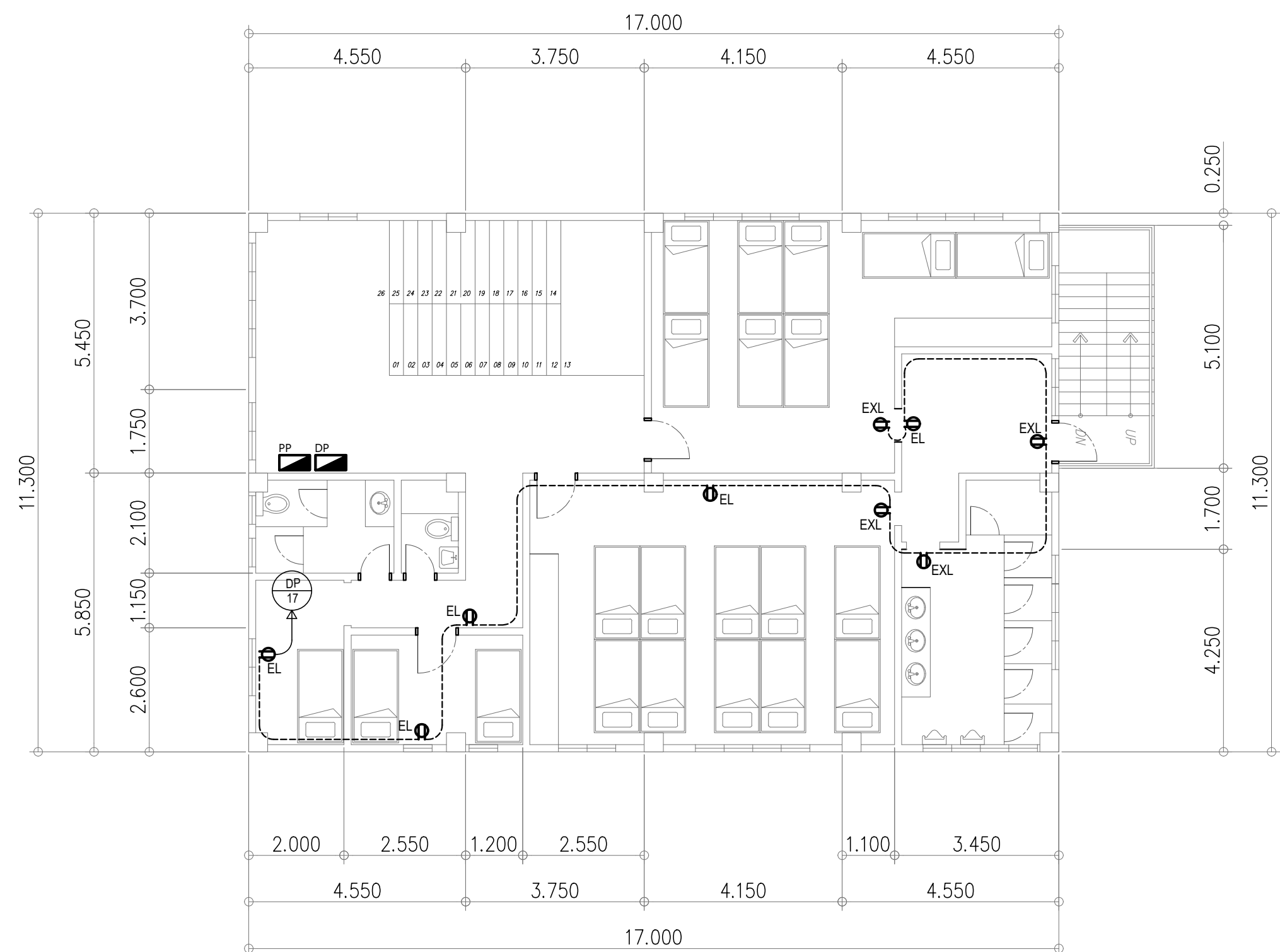
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DISTRICT ENGINEER
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SHEET CONTENT :
POWER LAYOUT
SHEET NO.:
E-03



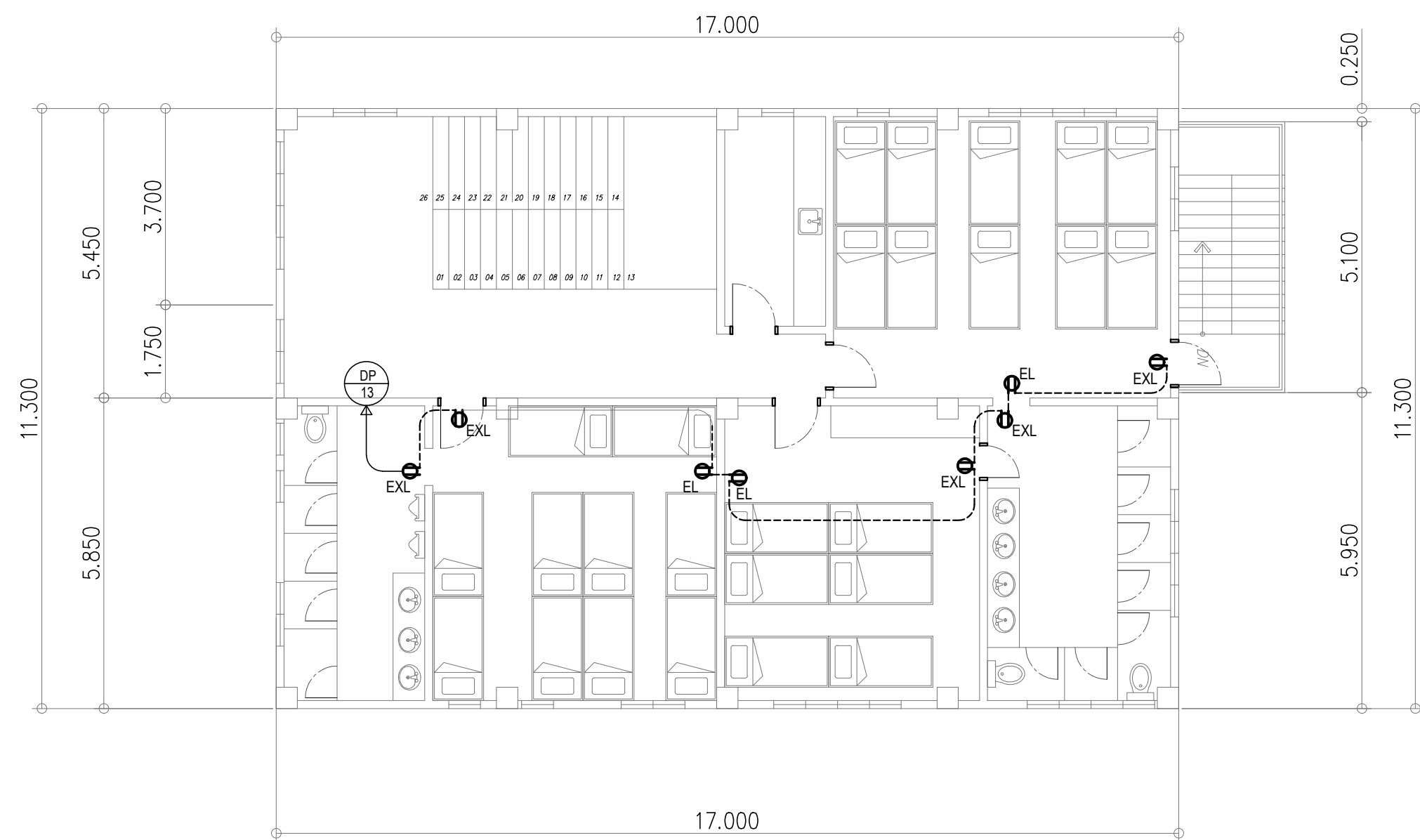
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E-11 SCALE 1 : 100 MTS.

2F EL & EXL LAY-OUT



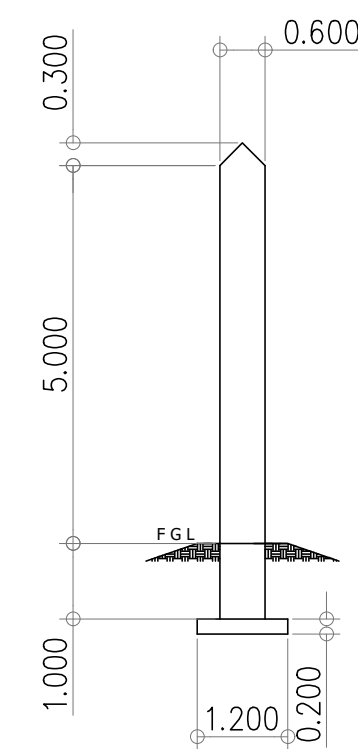
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3F EL & EXL LAY-OUT



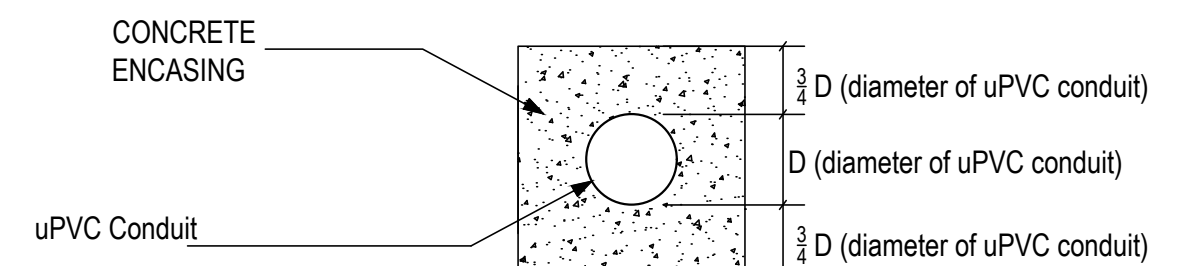
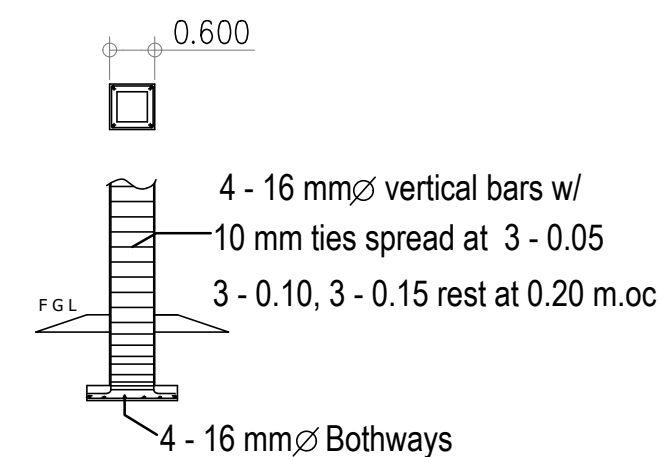
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E-13 SCALE 1 : 100 MTS.

4F EL & EXL LAY-OUT



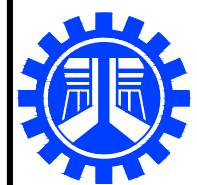
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E-14 SCALE N T S

ELECTRICAL PEDESTAL DETAIL



4
E-15 SCALE N T S

ROUGHING INS DETAIL



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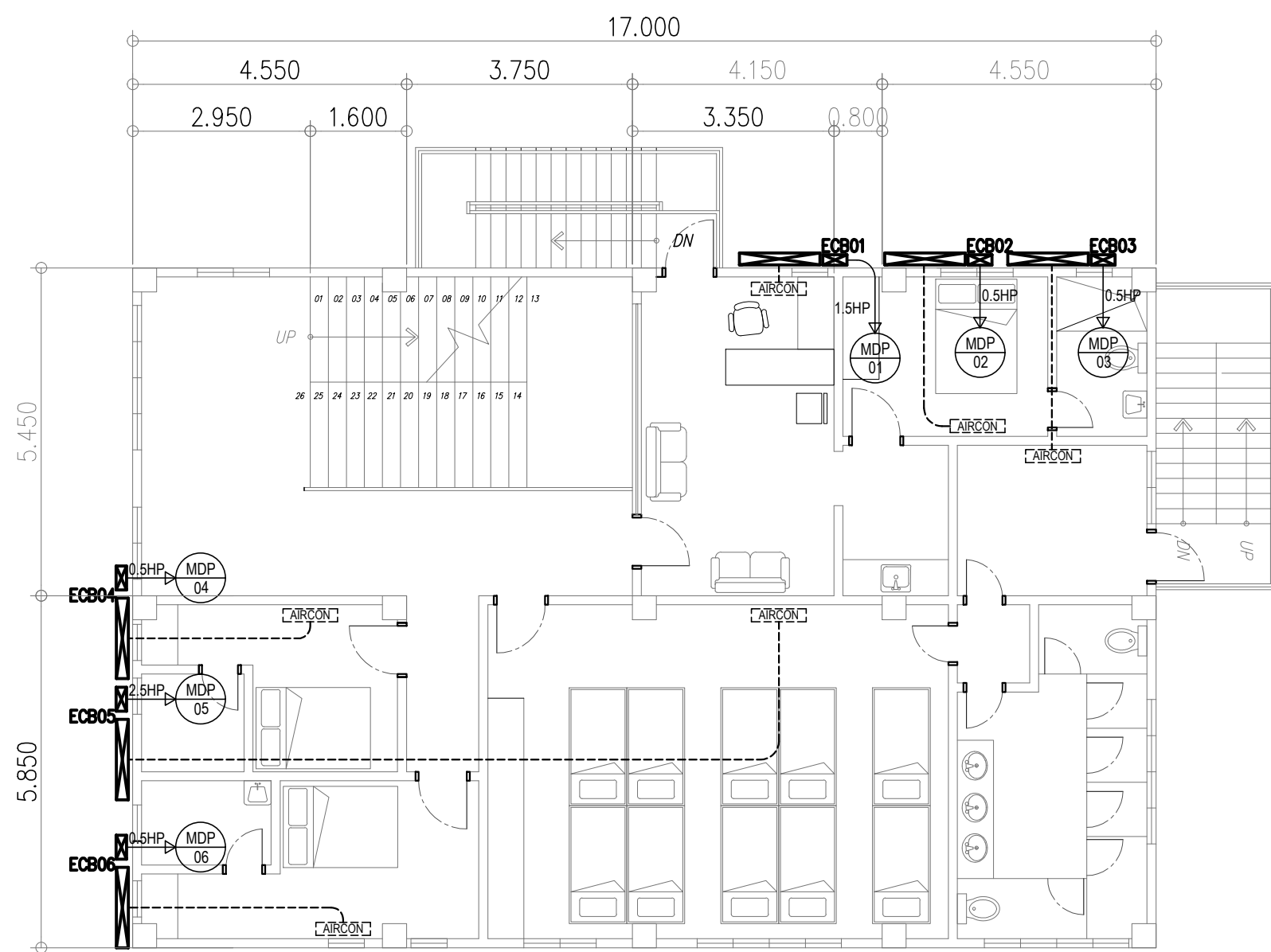
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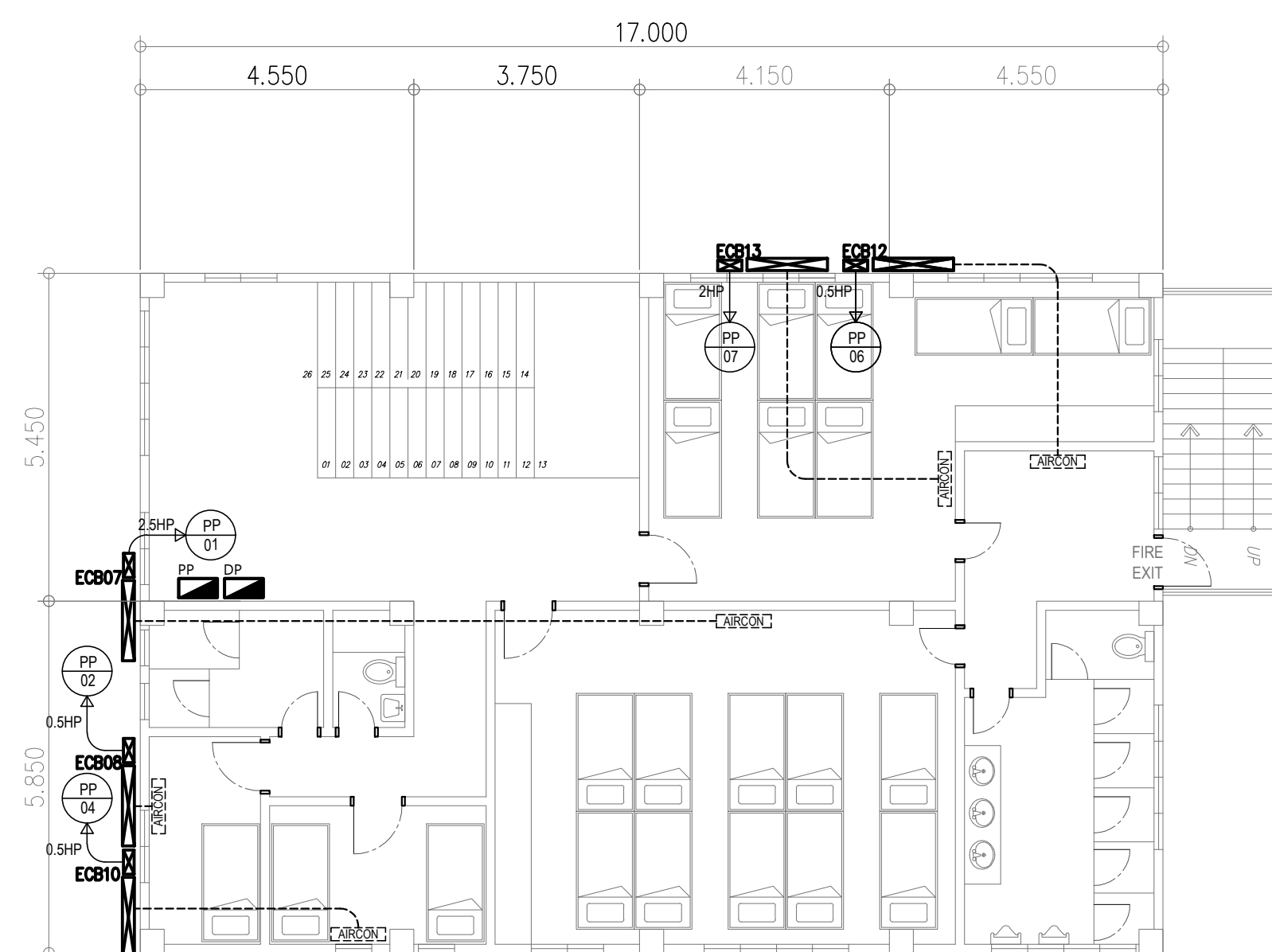
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Date Issued:	Place issued:
SHEET CONTENT :	SHEET NO.:
EL/EXL LAY-OUT ELECTRICAL PEDESTAL DETAIL ROUGHING INS DETAIL	E-04



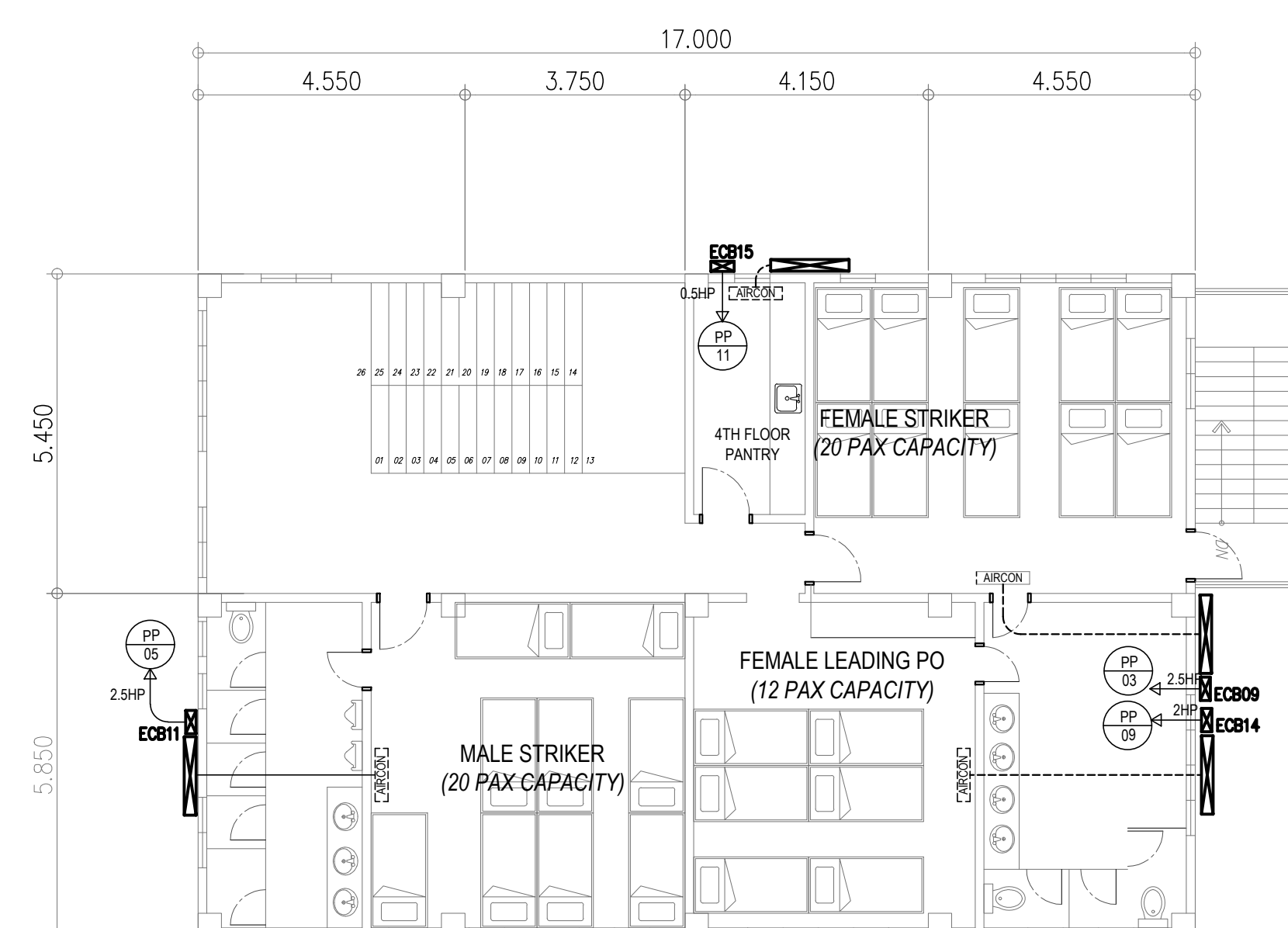
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E-16

2F ACU LAY-OUT
SCALE 1 : 100 MTS.



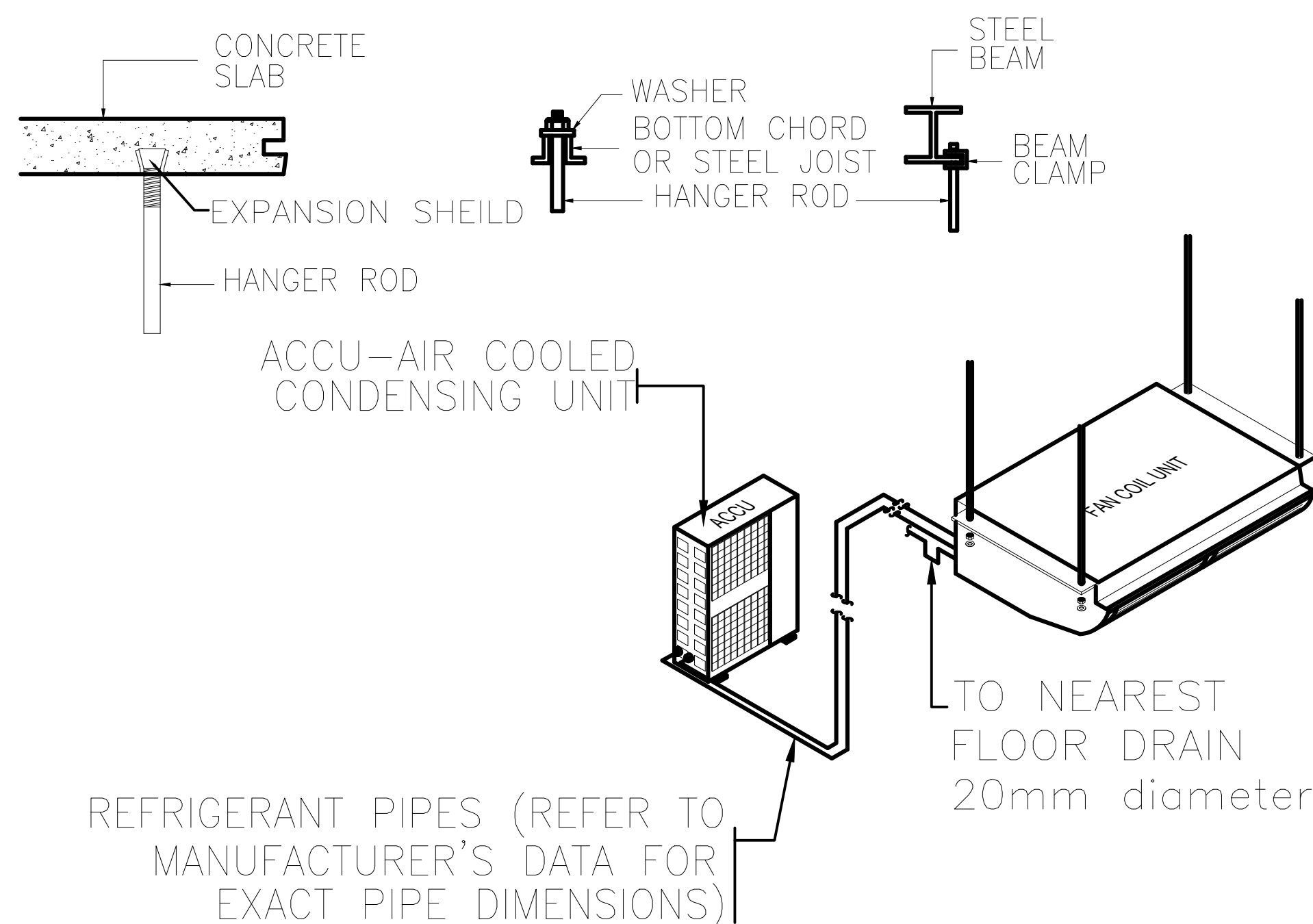
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E-17

3F ACU LAY-OUT
SCALE 1 : 100 MTS.



5
E-18

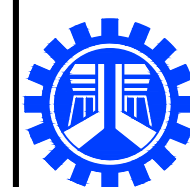
4F ACU LAY-OUT
SCALE 1 : 100 MTS.



5
E-19

CEILING SUSPENDED
INSTALLATION DETAIL
SCALE NTS.

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SHEET CONTENT :	SHEET NO.:
ACU LAYOUT CEILING SUSPENDED ACU INSTALLATION DETAIL	E-05



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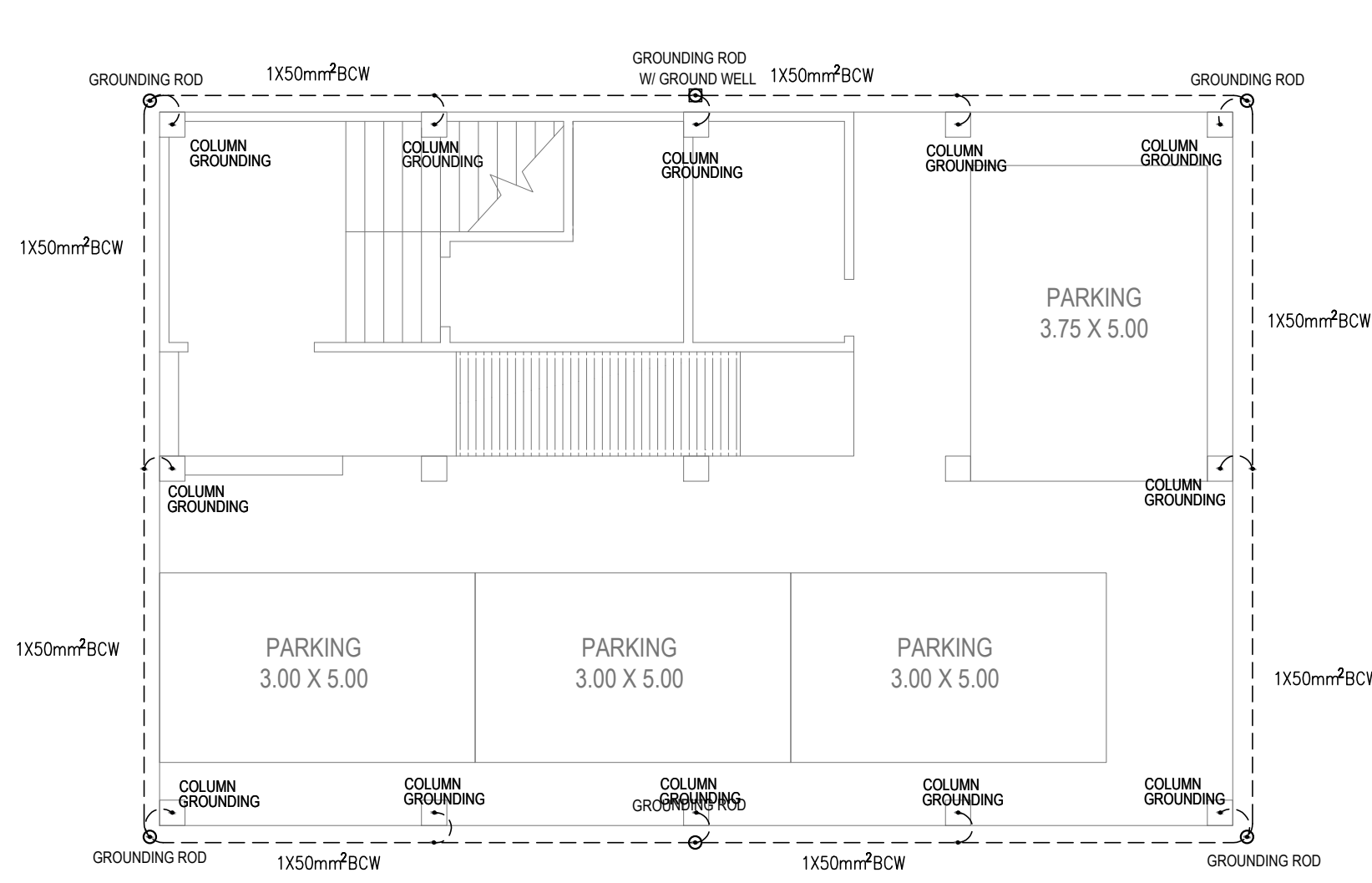
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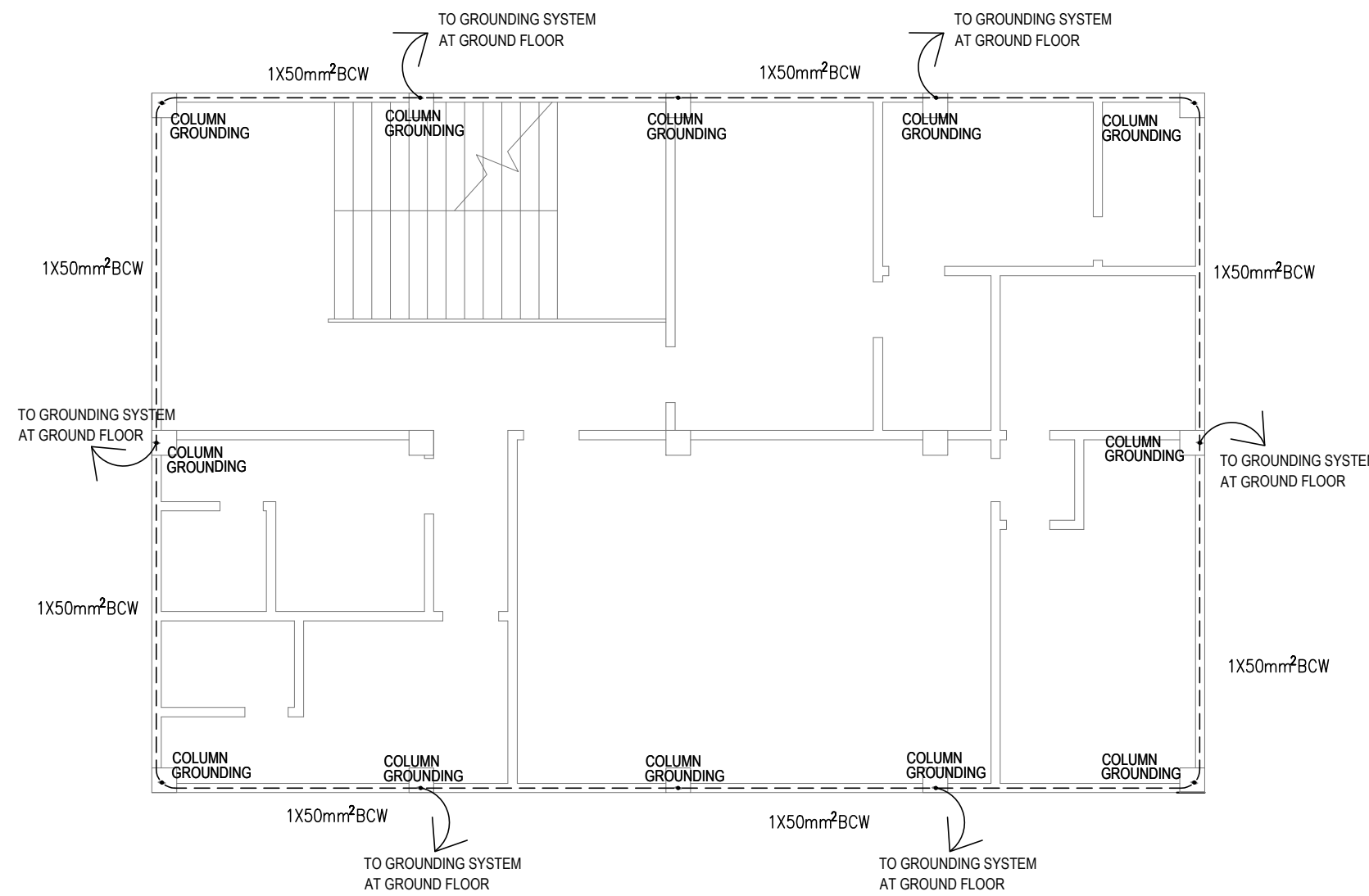
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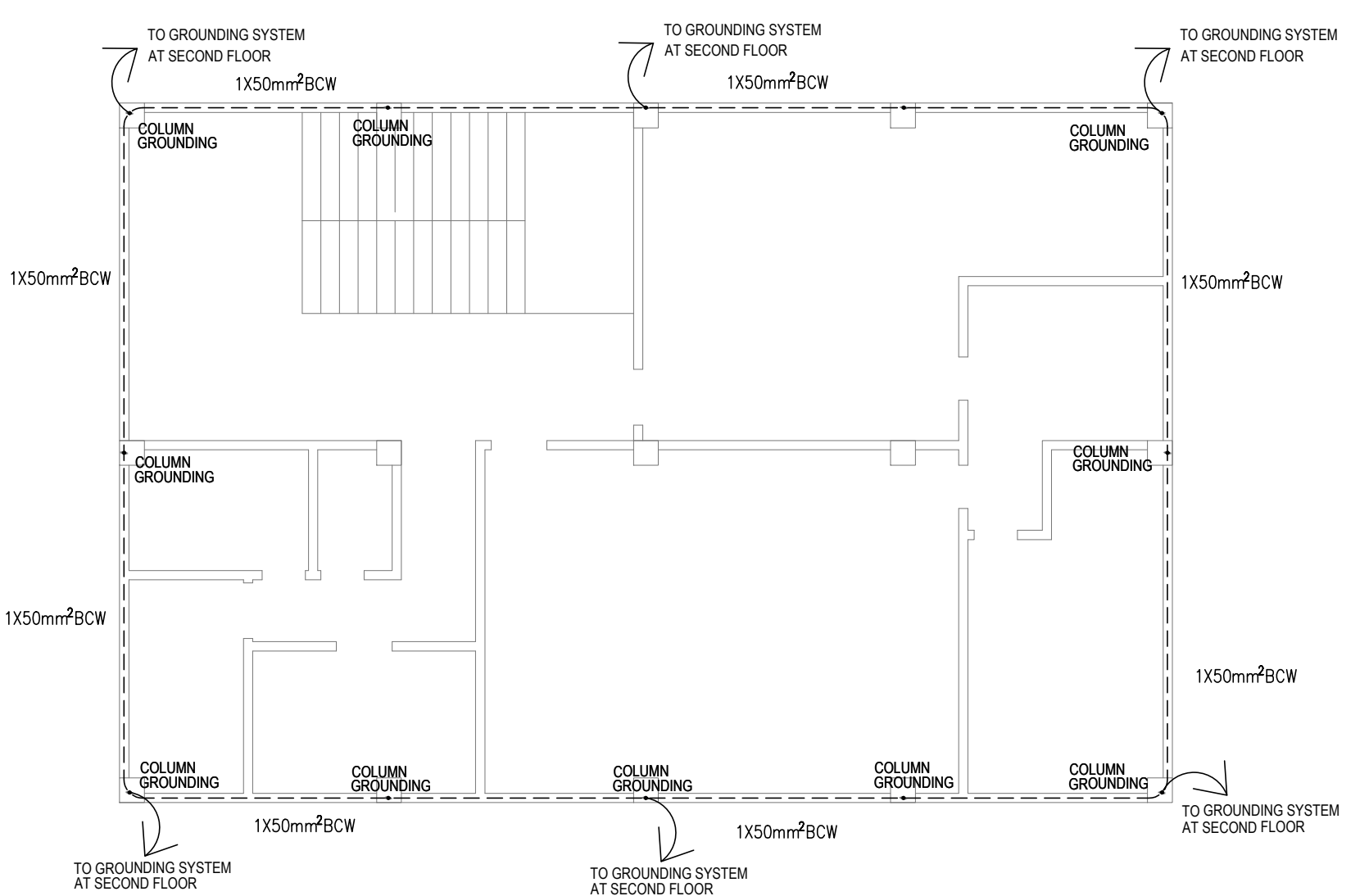
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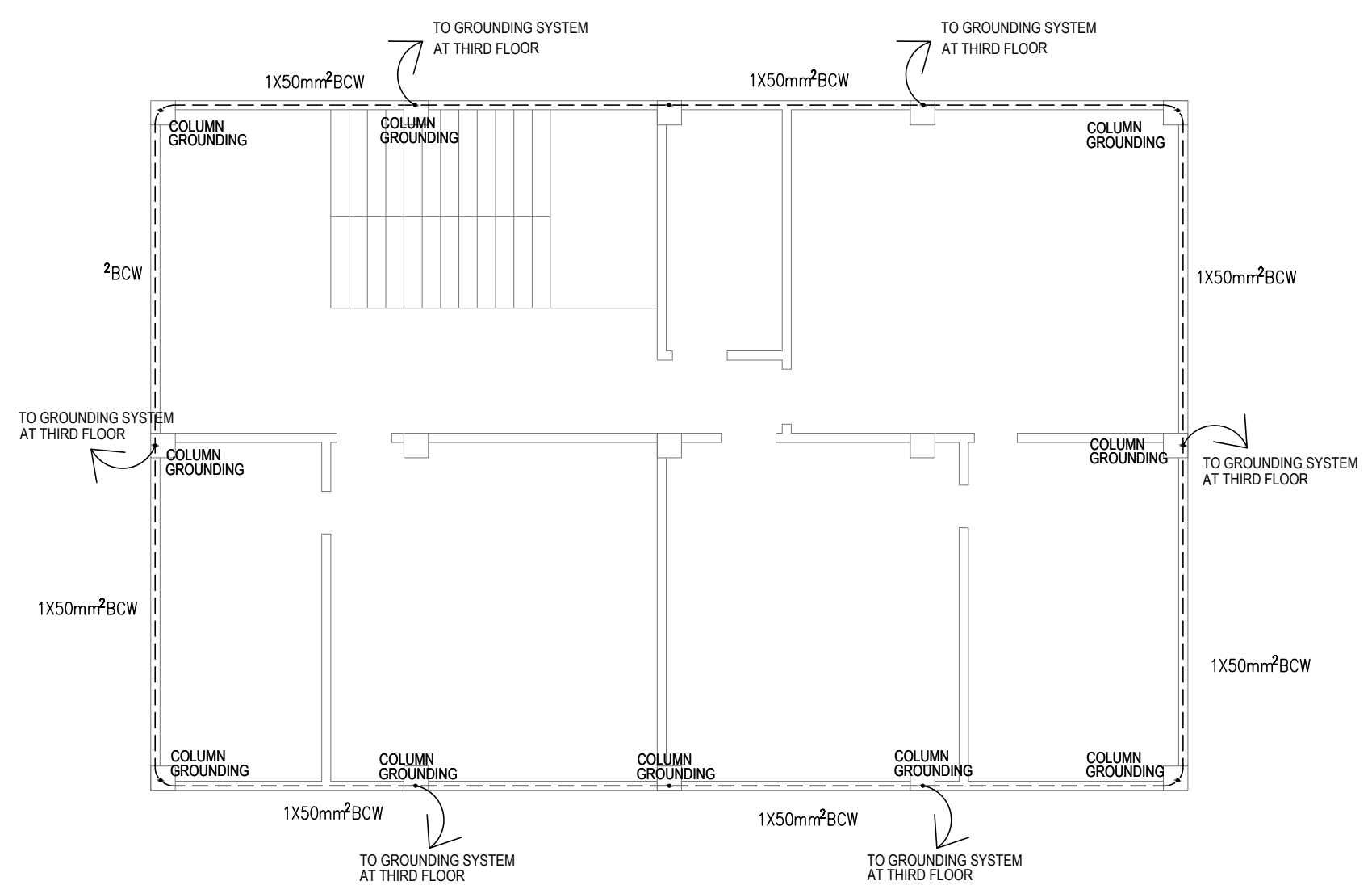
6 GF GROUNDING LAY-OUT
E-20 SCALE 1 : 100 MTS.



6 2F GROUNDING LAY-OUT
E-21 SCALE 1 : 100 MTS.



6 3F GROUNDING LAY-OUT
E-22 SCALE 1 : 100 MTS.



6 4F GROUNDING LAY-OUT
E-23 SCALE 1 : 100 MTS.

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 REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS REGIONAL OFFICE No. IV-A BATANGAS 2ND DISTRICT ENGINEERING OFFICE KUMINTANG ILAYA, BATANGAS CITY	PROJECT TITLE / LOCATION :	DRAWN & PREPARED BY:	REVIEWED & SUBMITTED :	RECOMMENDED :	APPROVED :	SHEET CONTENT :	SHEET NO.:
	CY 2025 PROJECT CONVERGENCE AND SPECIAL SUPPORT PROGRAM, BASIC INFRASTRUCTURE PROGRAM (BIP), MULTI-PURPOSE BUILDINGS/FACILITIES TO SUPPORT SOCIAL SERVICES, CONSTRUCTION/IMPROVEMENT OF MULTI-PURPOSE BUILDINGS (LIVING QUARTERS) OF PHILIPPINE COAST GUARD SOUTHERN TAGALOG, BARANGAY STA. CLARA, BATANGAS CITY	JAY M. VIVO ENGINEER II DATE :	GEMMA L. OLAN CHIEF PLANNING & DESIGN SECTION DATE :	ARIEL V. ARMEDILLA ASSISTANT DISTRICT ENGINEER DATE :	SONIA D. PAGLICAUAN DISTRICT ENGINEER DATE :	GROUNDING LAYOUT	E-06

PANEL " MDP "

CKT No.	LOAD DESCRIPTION PANEL		RATED VOLTS	VOLT AMPERE	CURRENT				CB RATING				RESISTANCE (R)	INDUCTANCE (XL)	IMPEDANCE (Z)	VOLTAGE DROP			LENGTH OF WIRE (m)	WIRE SIZE mm²	CONDUIT SIZE mm		
					φAB	φBC	φCA	3-P	AT	AF	POLE	KAIC				TYPE	V d	Ve				% V d	
1	SPLIT	1	1.5Hp	228.28	2300	10.08	-	-	-	30	50	2	MCCB	1.200	0.050	1.201	0.794	227.486	0.345	10	2-5.5 THWN2 + 1 - 3.5 THWN2	20 (u PVC)	
2	SPLIT	1	0.5Hp	228.28	1150	5.04	-	-	-	20	50	2	MCCB	1.200	0.050	1.201	0.436	227.844	0.190	11	2-5.5 THWN2 + 1 - 3.5 THWN2	20 (u PVC)	
3	SPLIT	1	0.5Hp	228.28	1150	-	5.04	-	-	20	50	2	MCCB	1.200	0.050	1.201	0.476	227.804	0.207	12	2-5.5 THWN2 + 1 - 3.5 THWN2	20 (u PVC)	
4	SPLIT	1	0.5Hp	228.28	1150	-	5.04	-	-	20	50	2	MCCB	1.200	0.050	1.201	0.555	227.725	0.242	14	2-5.5 THWN2 + 1 - 3.5 THWN2	20 (u PVC)	
5	SPLIT	1	2.5Hp	228.28	3450	-	-	15.11	-	30	50	2	MCCB	0.780	0.052	0.782	1.973	226.307	0.858	14	2-8.0 THWN2 + 1 - 5.5 THWN2	25 (u PVC)	
6	SPLIT	1	0.5Hp	228.28	1150	-	-	5.04	-	20	50	2	MCCB	1.200	0.050	1.201	0.595	227.685	0.259	15	2-5.5 THWN2 + 1 - 3.5 THWN2	20 (u PVC)	
7	PANEL "PP "			228.26	21,970.00	34.57	34.57	27.49	-	100	150	3	MCCB	0.19	0.05	0.20	0.93	227.33	0.40	14.00	3-30 THWN2 + 1 - 22 THWN2	50 (uPVC)	
8	PANEL " EDP "			228.26	25,812.50	68.54	57.41	62.68	-	150	150	3	B.O.	0.12	0.04	0.13	0.52	227.74	0.22	6.00	3-50 THWN2 + 1 - 38 THWN2	50 (uPVC)	
TOTAL				230	21970	118.22	102.05	110.32	0.00	300	300	3	-	MCCB	0.054	0.052	0.075	1.743	228.257	0.76	20	3 - 125 THWN2 + 1 - 50 THWN2	80 (RSC)
I ₃₀				=	118.22*1.732				=	204.76													
I _{CONDUCTOR}				=	(204.76*125%)/0.25*15.11				=	259.73													
USE				=	3-125mm² THWN2 & 1-50mm² THWN2 Ground																		
				=	80 mmφ RSC																		
PROTECTION				=	300AT, 3P, 300AF MCCB																		

PANEL " EDP "

CKT	LOAD DESCRIPTION			RATED	VOLT	CURRENT				CB RATING					RESISTANCE	INDUCTANCE	IMPEDANCE	VOLTAGE DROP			LENGTH OF WIRE	WIRE	CONDUIT
	No.	LO	CO			VOLTS	AMPERE	φAB	φBC	φCA	3-P	AT	AF	POLE				KAIC	TYPE	(R)			
1	10			227.77	1250	5.49	-	-	-	15	50	2	10	B.O.	2.000	0.054	2.001	3.024	224.746	1.315	42	2-3.5 THWN ₂ + 1 - 3.5 THWN ₂	20 (u PVC)
2	11			227.77	1375	6.04	-	-	-	15	50	2	10	B.O.	2.000	0.054	2.001	3.168	224.602	1.377	40	2-3.5 THWN ₂ + 1 - 3.5 THWN ₂	20 (u PVC)
3	9			227.77	1125	-	4.94	-	-	15	50	2	10	B.O.	2.000	0.054	2.001	2.138	225.632	0.930	33	2-3.5 THWN ₂ + 1 - 3.5 THWN ₂	20 (u PVC)
4	9			227.77	1125	-	4.94	-	-	15	50	2	10	B.O.	2.000	0.054	2.001	2.268	225.502	0.986	35	2-3.5 THWN ₂ + 1 - 3.5 THWN ₂	20 (u PVC)
5	11			227.77	1375	-	-	6.04	-	15	50	2	10	B.O.	2.000	0.054	2.001	2.534	225.236	1.102	32	2-3.5 THWN ₂ + 1 - 3.5 THWN ₂	20 (u PVC)
6	11			227.77	1375	-	-	6.04	-	15	50	2	10	B.O.	2.000	0.054	2.001	3.168	224.602	1.377	40	2-3.5 THWN ₂ + 1 - 3.5 THWN ₂	20 (u PVC)
7		7		227.77	2187.5	9.60	-	-	-	20	50	2	10	B.O.	1.200	0.050	1.201	3.026	224.744	1.315	40	2-6.5 THWN ₂ + 1 - 3.5 THWN ₂	20 (u PVC)
8		8		227.77	2500	10.98	-	-	-	20	50	2	10	B.O.	1.200	0.050	1.201	3.112	224.658	1.353	36	2-6.5 THWN ₂ + 1 - 3.5 THWN ₂	20 (u PVC)
9		7		227.77	2187.5	-	9.60	-	-	20	50	2	10	B.O.	1.200	0.050	1.201	2.572	225.198	1.118	34	2-6.5 THWN ₂ + 1 - 3.5 THWN ₂	25 (u PVC)
10		1	PANTRY	227.77	1000	-	4.39	-	-	20	50	2	10	GFCI	2.000	0.054	2.001	0.806	226.964	0.351	14	2-3.5 THWN ₂ + 1 - 3.5 THWN ₂	20 (u PVC)
11		1	FACP	227.77	1000	-	-	4.39	-	20	50	2	10	B.O.	2.000	0.054	2.001	0.634	227.136	0.275	11	2-3.5 THWN ₂ + 1 - 3.5 THWN ₂	20 (u PVC)
12		1	SPARE	227.77	500	-	-	2.20	-	20	50	2	10	B.O.	-	-	-	-	-	-	-	-	20 (u PVC)
PANEL " DP "				227.74	25,812.50	36.43	33.53	44.02	-	100	125	3.00	0.00	B.O.	0.190	0.045	0.20	1.27	226.47	0.55	15.00	3-30 THWN/2 + 1 -- 22 THWN/2	50 (uPVC)
TOTAL				228.257	25813	68.54	57.41	62.68	0.00	150	150	3	-	B.O.	0.120	0.044	0.128	0.517	227.740	0.22	6	3-50 THWN2 + 1 -- 38 THWN2	50 (uPVC)
I ₃₀	=	68.54*1.732				=	118.70																
I _{CONDUCTOR}	=	118.70*1				=	118.70																
USE	=	3-50mm ² THWN ₂ & 1-38mm ² THWN ₂ Ground																					
		in 50mmg uPVC																					
PROTECTION	=	150AT, 3P, 150AF MCCB																					

PANEL " DP "

CKT	LOAD DESCRIPTION			RATED	VOLT		CURRENT			CB RATING					RESISTANCE	INDUCTANCE	IMPEDANCE	VOLTAGE DROP			LENGTH OF WIRE	WIRE SIZE mm ²	CONDUIT SIZE mm
					VOLTS	AMPERE	φAB	φBC	φCA	3-P	AT	AF	POLE	KAIC				TYPE	(R)	(X)			
No.	LO	CO		VOLTS	AMPERE	φAB	φBC	φCA	3-P	AT	AF	POLE	KAIC	TYPE	(R)	(X)	(Z)	V _d	V _e	% V _d	(m)		
1	10			226.46	1250	5.52	-	-	-	15	50	2	10	B.O.	2.000	0.054	2.001	3.041	223.419	1.322	42	2-3.5 THWN ₂ + 1 - 3.5 THWN ₂	20 (u PVC)
2	10			226.46	1250	5.52	-	-	-	15	50	2	10	B.O.	2.000	0.054	2.001	2.317	224.143	1.008	32	2-3.5 THWN ₂ + 1 - 3.5 THWN ₂	20 (u PVC)
3	10			226.46	1250	-	5.52	-	-	15	50	2	10	B.O.	2.000	0.054	2.001	2.752	223.708	1.196	38	2-3.5 THWN ₂ + 1 - 3.5 THWN ₂	20 (u PVC)
4	9			226.46	1125	-	4.97	-	-	15	50	2	10	B.O.	2.000	0.054	2.001	2.216	224.244	0.963	34	2-3.5 THWN ₂ + 1 - 3.5 THWN ₂	20 (u PVC)
5	10			226.46	1250	-	-	5.52	-	15	50	2	10	B.O.	2.000	0.054	2.001	2.462	223.998	1.071	34	2-3.5 THWN ₂ + 1 - 3.5 THWN ₂	20 (u PVC)
6	11			226.46	1375	-	-	6.07	-	15	50	2	10	B.O.	2.000	0.054	2.001	3.346	223.114	1.455	42	2-3.5 THWN ₂ + 1 - 3.5 THWN ₂	20 (u PVC)
7	1		SPARE	226.46	1000	4.42	-	-	-	15	50	2	10	B.O.	-	-	-	-	-	-	-	-	20 (u PVC)
8		8		226.46	2500	11.04	-	-	-	20	50	2	10	B.O.	1.200	0.050	1.201	3.130	223.330	1.361	36	2-5.5 THWN ₂ + 1 - 3.5 THWN ₂	20 (u PVC)
9		7		226.46	2187.5	-	9.66	-	-	20	50	2	10	B.O.	1.200	0.050	1.201	2.510	223.950	1.092	33	2-5.5 THWN ₂ + 1 - 3.5 THWN ₂	20 (u PVC)
10		1	PANTRY	226.46	1000	-	4.42	-	-	20	50	2	10	GFCI	2.000	0.054	2.001	1.043	225.417	0.453	18	2-3.5 THWN ₂ + 1 - 3.5 THWN ₂	20 (u PVC)
11		8		226.46	2500	-	-	11.04	-	20	50	2	10	B.O.	1.200	0.050	1.201	3.391	223.069	1.474	39	2-5.5 THWN ₂ + 1 - 3.5 THWN ₂	20 (u PVC)
12		8		226.46	2500	-	-	11.04	-	20	50	2	10	B.O.	1.200	0.050	1.201	3.478	222.982	1.512	40	2-5.5 THWN ₂ + 1 - 3.5 THWN ₂	20 (u PVC)
13		8	EL/EXL	226.46	1250	5.52	-	-	-	15	50	2	10	B.O.	2.000	0.054	2.001	2.028	224.432	0.882	28	2-3.5 THWN ₂ + 1 - 3.5 THWN ₂	20 (u PVC)
14		1	PANTRY	226.46	1000	4.42	-	-	-	20	50	2	10	GFCI	2.000	0.054	2.001	0.985	225.475	0.428	17	2-3.5 THWN ₂ + 1 - 3.5 THWN ₂	20 (u PVC)
15		6	EL/EXL	226.46	937.5	-	4.14	-	-	15	50	2	10	B.O.	2.000	0.054	2.001	1.629	224.831	0.708	30	2-3.5 THWN ₂ + 1 - 3.5 THWN ₂	20 (u PVC)
16		7	EL/EXL	226.46	1093.75	-	4.83	-	-	15	50	2	10	B.O.	2.000	0.054	2.001	2.218	224.244	0.964	35	2-3.5 THWN ₂ + 1 - 3.5 THWN ₂	20 (u PVC)
17		9	EL/EXL	226.46	1406.25	-	-	6.21	-	15	50	2	10	B.O.	2.000	0.054	2.001	2.933	223.527	1.275	36	2-3.5 THWN ₂ + 1 - 3.5 THWN ₂	20 (u PVC)
18		1	SPARE	226.46	937.5	-	-	4.14	-	15	50	2	10	B.O.	-	-	-	-	-	-	-	-	20 (u PVC)
TOTAL				227.740	25812.5	36.43	33.53	44.02	-	100	125	3		B.O.	0.190	0.045	0.195	1.268	226.472	0.551	15	3-30 THWN ₂ + 1 - 22 THWN ₂	50 (u PVC)
I _{SC} I _{CONDUCTOR}				=	44.02*1.732	=	76.24																
				=	(76.24*100%)	=	76.24																
USE				=	3-30mm ² THWN ₂ & 1-22mm ² THWN ₂ , Ground																		
				=	In 50 mmg uPVC																		
PROTECTION				=	100A/T / 125AF, 3P, BOLT-TON																		