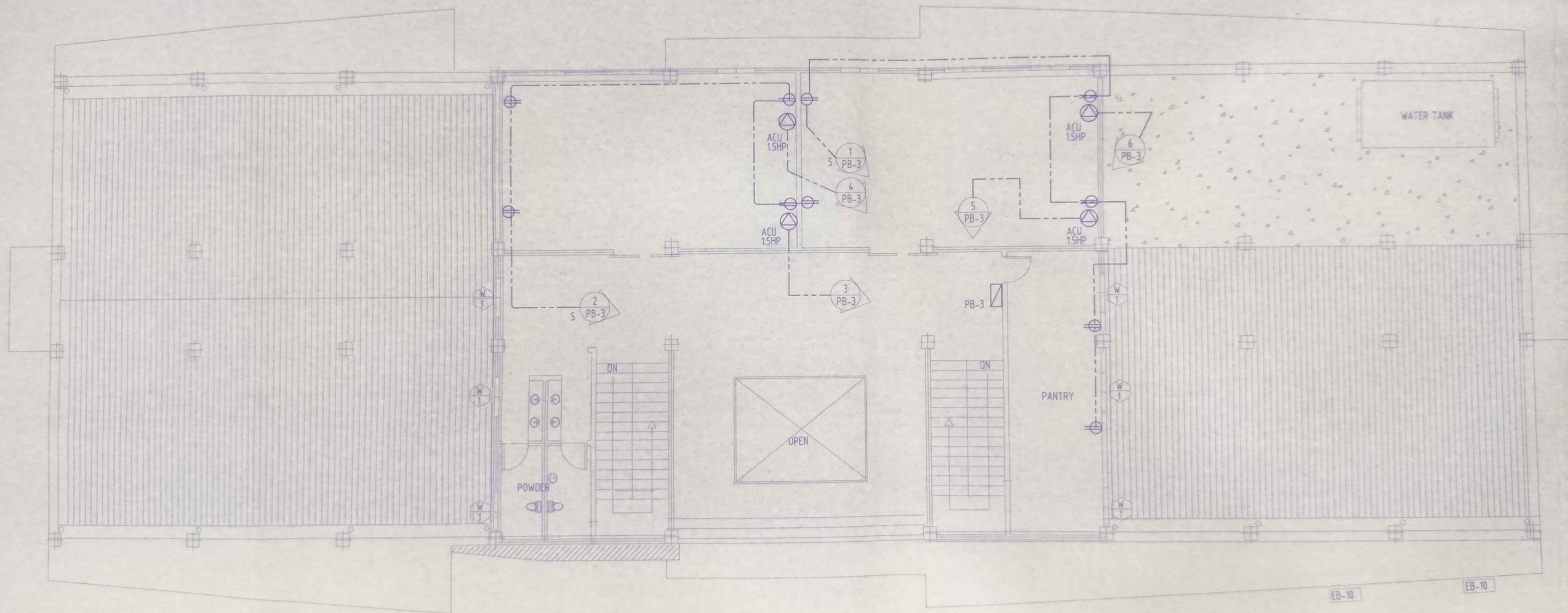


SECOND FLOOR POWER OUTLET LAY-OUT



THIRD FLOOR POWER OUTLET LAY-OUT

# DESIGN LOAD COMPUTATION

PB-1

CKT. NO.	DESCRIPTION	OUTLETS			VOLTAGE RATING	WATTAGE RATING	AMPERE			WIRE SIZE	CONDUIT PIPE SIZE	PROTECTION
		P.O.	L.O.	ACU			I <sub>AB</sub>	I <sub>BC</sub>	I <sub>CA</sub>			
1	POWER	7			230	360	10.95			3.5MM <sup>2</sup> THHN	20MM φ	20 A
2	POWER	9			230	360		14.09		3.5MM <sup>2</sup> THHN	20MM φ	20 A
3	POWER	8			230	360			12.52	3.5MM <sup>2</sup> THHN	20MM φ	20 A
4	POWER	9			230	360	14.09			3.5MM <sup>2</sup> THHN	20MM φ	20 A
5	POWER	8			230	360			12.52	3.5MM <sup>2</sup> THHN	20MM φ	20 A
6	ACU 2HP		1		230	2760			12	3.5MM <sup>2</sup> THHN	20MM φ	30 A
7	ACCU 1HP		1		230	1840	8			3.5MM <sup>2</sup> THHN	20MM φ	30 A
8	ACCU 1HP		1		230	1840		8		3.5MM <sup>2</sup> THHN	20MM φ	30 A
9	ACCU 1HP		1		230	1840			8	3.5MM <sup>2</sup> THHN	20MM φ	30 A
10	ACCU 1HP		1		230	1840	8			3.5MM <sup>2</sup> THHN	20MM φ	30 A
11	ACCU 1.5HP		1		230	2300			10	3.5MM <sup>2</sup> THHN	20MM φ	30 A
12	ACCU 2HP		1		230	2760			12	3.5MM <sup>2</sup> THHN	20MM φ	30 A
13	ACCU 2HP		1		230	2760	12			3.5MM <sup>2</sup> THHN	20MM φ	30 A
14	ACCU 1.5HP		1		230	2300			10	3.5MM <sup>2</sup> THHN	20MM φ	30 A
15	ACCU 1.5HP		1		230	2300			10	3.5MM <sup>2</sup> THHN	20MM φ	30 A
16	ACCU 1HP		1		230	1840	8			3.5MM <sup>2</sup> THHN	20MM φ	30 A
17	ACCU 2HP		1		230	2760		12		3.5MM <sup>2</sup> THHN	20MM φ	30 A
18	ACCU 1HP		1		230	1840			8	3.5MM <sup>2</sup> THHN	20MM φ	30 A
19	ACCU 1HP		1		230	1840	8			3.5MM <sup>2</sup> THHN	20MM φ	30 A
20	LIGHT	16			230	40		2.78		3.5MM <sup>2</sup> THHN	20MM φ	15 A
21	LIGHT	16			230	40			2.78	3.5MM <sup>2</sup> THHN	20MM φ	15 A
22	LIGHT	15			230	40	2.60			3.5MM <sup>2</sup> THHN	20MM φ	15 A
23	LIGHT	16			230	40		2.78		3.5MM <sup>2</sup> THHN	20MM φ	15 A
24	LIGHT	16			230	40			2.78	3.5MM <sup>2</sup> THHN	20MM φ	15 A
25	LIGHT	15			230	40	2.60			3.5MM <sup>2</sup> THHN	20MM φ	15 A
26	LIGHT	16			230	40		2.78		3.5MM <sup>2</sup> THHN	20MM φ	15 A
27	LIGHT	16			230	40			2.78	3.5MM <sup>2</sup> THHN	20MM φ	15 A
28	LIGHT	16			230	40		2.78		3.5MM <sup>2</sup> THHN	20MM φ	15 A
29	LIGHT	15			230	40	2.60			3.5MM <sup>2</sup> THHN	20MM φ	15 A
30	LIGHT	16			230	40			2.78	3.5MM <sup>2</sup> THHN	20MM φ	15 A
31	LIGHT	14			230	40			2.43	3.5MM <sup>2</sup> THHN	20MM φ	15 A
TOTAL							77.02	77.55	76.07			

PHASE CURRENT  
 SIZE OF THE SUB FEEDER= 77.55 + 25% OF THE HEIGHT MOTOR IN THE GROUP= 80.55  
 LINE CURRENT:  
 $\sqrt{3} (80.55) = 139.51 \text{ A}$  USE 3- 50MM<sup>2</sup> THHN COPPER WIRE

PB-2

CKT. NO.	DESCRIPTION	OUTLETS			VOLTAGE RATING	WATTAGE RATING	CURRENT			WIRE SIZE	CONDUIT PIPE SIZE	PROTECTION
		P.O.	L.O.	ACU			I <sub>AB</sub>	I <sub>BC</sub>	I <sub>CA</sub>			
1	POWER	8			230	360	12.52			3.5MM <sup>2</sup> THHN	20MM φ	20 A
2	POWER	8			230	360		12.52		3.5MM <sup>2</sup> THHN	20MM φ	20 A
3	POWER	7			230	360			10.95	3.5MM <sup>2</sup> THHN	20MM φ	20 A
4	POWER	6			230	360	9.39			3.5MM <sup>2</sup> THHN	20MM φ	20 A
5	ACCU 1 HP		1		230				8	3.5MM <sup>2</sup> THHN	20MM φ	30 A
6	ACCU 1.5HP		1		230				10	3.5MM <sup>2</sup> THHN	20MM φ	30 A
7	ACCU 1HP		1		230				8	3.5MM <sup>2</sup> THHN	20MM φ	30 A
8	ACCU 2HP		1		230				12	3.5MM <sup>2</sup> THHN	20MM φ	30 A
9	ACCU 1.5HP		1		230				10	3.5MM <sup>2</sup> THHN	20MM φ	30 A
10	ACCU 1HP		1		230				8	3.5MM <sup>2</sup> THHN	20MM φ	30 A
11	ACCU 2HP		1		230				12	3.5MM <sup>2</sup> THHN	20MM φ	30 A
12	ACCU 1HP		1		230				8	3.5MM <sup>2</sup> THHN	20MM φ	30 A
13	ACCU 1HP		1		230				8	3.5MM <sup>2</sup> THHN	20MM φ	30 A
14	ACCU 2HP		1		230				12	3.5MM <sup>2</sup> THHN	20MM φ	30 A
15	LIGHT	16			230	40		2.78		3.5MM <sup>2</sup> THHN	20MM φ	15 A
16	LIGHT	16			230	40		2.78		3.5MM <sup>2</sup> THHN	20MM φ	15 A
17	LIGHT	16			230	40			2.78	3.5MM <sup>2</sup> THHN	20MM φ	15 A
18	LIGHT	15			230	40			2.60	3.5MM <sup>2</sup> THHN	20MM φ	15 A
19	LIGHT	16			230	40		2.78		3.5MM <sup>2</sup> THHN	20MM φ	15 A
20	LIGHT	15			230	40			2.60	3.5MM <sup>2</sup> THHN	20MM φ	15 A
21	LIGHT	15			230	40			2.60	3.5MM <sup>2</sup> THHN	20MM φ	15 A
22	LIGHT	15			230	40	2.60			3.5MM <sup>2</sup> THHN	20MM φ	15 A
23	LIGHT	12			230	40			2.08	3.5MM <sup>2</sup> THHN	20MM φ	15 A
24	LIGHT	12			230	40			2.08	3.5MM <sup>2</sup> THHN	20MM φ	15 A
25	LIGHT	12			230	40			2.08	3.5MM <sup>2</sup> THHN	20MM φ	15 A
TOTAL							53.55	51.98	51.09			

PHASE CURRENT  
 SIZE OF THE SUB FEEDER= 53.55 + 25% OF THE HEIGHT MOTOR IN THE GROUP= 56.55  
 LINE CURRENT:  
 $\sqrt{3} (56.55) = 98 \text{ A}$  USE 3- 30MM<sup>2</sup> THHN COPPER WIRE

PB-3

CKT. NO.	DESCRIPTION	OUTLETS			VOLTAGE RATING	WATTAGE RATING	AMPERE RATING	CURRENT			WIRE SIZE	CONDUIT PIPE SIZE	PROTECTION
		P.O.	L.O.	ACU				I <sub>AB</sub>	I <sub>BC</sub>	I <sub>CA</sub>			
1	POWER	5			230	360		7.8			3.5MM <sup>2</sup> THHN	20MM φ	20 A
2	POWER	5			230	360			7.8		3.5MM <sup>2</sup> THHN	20MM φ	20 A
3	ACCU 1.5HP		1		230	2300				10	3.5MM <sup>2</sup> THHN	20MM φ	30 A
4	ACCU 1.5HP		1		230	2300				10	3.5MM <sup>2</sup> THHN	20MM φ	30 A
5	ACCU 1.5HP		1		230	2300				10	3.5MM <sup>2</sup> THHN	20MM φ	30 A
6	ACCU 1.5HP		1		230	2300				10	3.5MM <sup>2</sup> THHN	20MM φ	30 A
7	LIGHT	16			230	40		2.78			3.5MM <sup>2</sup> THHN	20MM φ	30 A
8	LIGHT	13			230	40			2.26		3.5MM <sup>2</sup> THHN	20MM φ	30 A
9	LIGHT	13			230	40			2.26		3.5MM <sup>2</sup> THHN	20MM φ	30 A
10	LIGHT	13			230	40			2.26		3.5MM <sup>2</sup> THHN	20MM φ	30 A
11	LIGHT	15			230	40				2.60	3.5MM <sup>2</sup> THHN	20MM φ	30 A
TOTAL							22.84	22.66	22.26				

PHASE CURRENT  
 SIZE OF THE SUB FEEDER= 22.84 + 25% OF THE HEIGHT MOTOR IN THE GROUP= 25.09  
 LINE CURRENT:  
 $\sqrt{3} (25.09) = 98 \text{ A}$  USE 3- 8MM<sup>2</sup> THHN COPPER WIRE

TOTAL CURRENT= 80.55 + 56.55 + 25.09= 280.96  
 -- USE 3- 150MM<sup>2</sup> THHN COPPER TUBE

## GENERAL ELECTRICAL NOTES :

- ALL ELECTRICAL WORKS SHALL BE IN ACCORDANCE WITH THE PROVISIONS OF THE LATEST EDITION OF THE PHILIPPINE ELECTRICAL CODE, THE LAWS AND ORDINANCES OF THE LOCAL CODE, ENFORCING AUTHORITIES AND THE REQUIREMENTS OF THE LOCAL POWER AND TELEPHONE UTILITY COMPANIES.
- ALL MATERIALS TO BE USED SHALL BE NEW AND INSTALLED IN APPLICATIONS FOR WHICH THEY ARE INTENDED.
- UTILIZATION VOLTAGE SHALL BE 230V, 1Ø, 3W, 60Hz
- ALL CONDUIT PIPES SHALL BE POLYVINYL CHLORIDE CONDUIT (EXCEPT AS NOTED ON THE PLANS AND SPECIFICATIONS. REFER TO SPECIFICATIONS FOR INSTALLATION REQUIREMENTS.
- MINIMUM SIZE OF CONDUIT SHALL BE 20 MM
- ALL CONDUITS SHALL BE CONCEALED UNLESS SPECIFICALLY SHOWN OR NOTED OTHERWISE. EXPOSED CONDUIT RUNS SHALL BE INSTALLED PARALLEL TO OR PERPENDICULAR WITH THE BUILDING LINE AND SUPPORTED BY CONDUIT CLAMPS EVERY 1.50 METERS.
- PROVIDE GALVANIZED PULLING WIRE G.A. 18 FOR ALL EMPTY CONDUITS.
- PULL BOXES SHALL BE PROVIDED BY THE CONTRACTOR WHENEVER NECESSARY TO FACILITATE WIRE PULLING EVEN IF THESE ARE NOT INDICATED ON THE PLANS.
- ALL LIGHTING AND CONVENIENCE OUTLET CIRCUITS SHALL BE 3 WIRE, 3.5 SQ.MM. TW UNLESS OTHERWISE NOTED. MINIMUM SIZE OF WIRE SHALL BE 3.5 SQ.MM. TW.
- ALL DUPLEX RECEPTACLE OUTLETS SHALL BE GROUNDING TYPE WITH PARALLEL SLOTS FOR 220V.
- UNLESS OTHERWISE NOTED, MOUNTING HEIGHT FOR WALL MOUNTED DEVICES SHALL BE:  
 RECEPTACLE OUTLET - 300 MM. AFF.  
 TELEPHONE OUTLET - 300 MM. AFF.  
 CATV OUTLET - 300 MM. AFF.  
 LIGHTING SWITCH - 1370 MM. AFF.

## LEGEND

ILLUSTRATION	DESCRIPTION
	PB-1 PANEL BOARD
	2-16 WATTS LED TUBE ON FLUSH MOUNTED LUMINAIRES WITH GRILLS
	EMERGENCY LAMP
	CIRCUIT HOME RUN WITH NO. OF LIGHTS PER CIRCUIT
	2 PRONG POWER OUTLET
	AIR CONDITION UNIT WITH ASSIGNED HORSE POWER