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**MINIMAL PROCESSING AND PACKAGING FACILITY  
 COMPUTATION OF LOAD SCHEDULE**

**LOAD SCHEDULE**

PART A CKT NO.	PB-1 LOAD DESCRIPTION	QUANTITY			RATED VOLTS	VA	PHASE CURRENT				PROTECTION			NO. & SIZE OF BRANCH CKT-WIRE	SIZE OF CONDUIT
		L.O.	C.O.	SW			I <sub>A</sub>	I <sub>B</sub>	I <sub>C</sub>	I <sub>3φ</sub>	AT	P	KAIC		
1	Panel Lighting Receptacle, LED, 36w	6		1	230	216	0.94				15	2	10	2-2.0mm sq. THHN	15mmØ PVC
2	Panel Lighting Receptacle, LED, 36w	9		8	230	324	1.41				15	2	10	2-2.0mm sq. THHN	15mmØ PVC
3	LED Lighting, Receptacle, 8-100w 2-236w	10		3	230	872	3.79				15	2	10	2-2.0mm sq. THHN	15mmØ PVC
4	LED Lighting, Receptacle, 8-100w	10		3	230	872	3.79				15	2	10	2-2.0mm sq. THHN	15mmØ PVC
5	Convenience Receptacle, Duplex		9		230	1620	7.04				20	2	10	2-3.5mm sq. THHN +1-3.5mm sq. GND	15mmØ PVC
6	Convenience Receptacle		4		230	720	3.13				20	2	10	2-3.5mm sq. THHN +1-3.5mm sq. GND	15mmØ PVC
7	Power Convenience Outlet		1		230	500	2.17				20	2	10	2-3.5mm sq. THHN +1-3.5mm sq. GND	15mmØ PVC
8	Power Convenience Outlet		1		230	500	2.17				20	2	10	2-3.5mm sq. THHN +1-3.5mm sq. GND	15mmØ PVC
9	Power Convenience Outlet		1		230	500	2.17				20	2	10	2-3.5mm sq. THHN +1-3.5mm sq. GND	15mmØ PVC
10	Power Convenience Outlet		1		230	500	2.17				20	2	10	2-3.5mm sq. THHN +1-3.5mm sq. GND	15mmØ PVC
11	Panel Lighting Receptacle, LED, 36w	12		7	230	432	1.88				15	2	10	2-3.5mm sq. THHN +1-3.5mm sq. GND	15mmØ PVC
12	Convenience Receptacle (Duplex)		6		230	1080	4.70				20	2	10	2-3.5mm sq. THHN +1-3.5mm sq. GND	15mmØ PVC
13	Spare														
14	Spare														
<b>SUBTOTAL (PART A)</b>		47.00	23.00	22.00		8,136.00	35.37								

I Tot. at 80% D.F = 8136/230v x 0.80

= 28.30 amps

Use: 60 AT, 2P, 240V, 10KAIC for service equipment  
 2 - 14mm sq. THHN for service feeder conductor




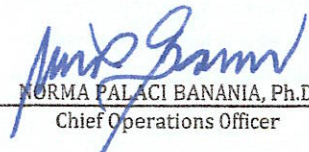
PART B CKT NO.	PB-2 (POWER PANEL) LOAD DESCRIPTION	QUANTITY			RATED VOLTS	VA	PHASE CURRENT				PROTECTION			NO. & SIZE OF BRANCH CKT-WIRE	SIZE OF CONDUIT
		L.O.	C.O.	SW			I <sub>A</sub>	I <sub>B</sub>	I <sub>C</sub>	I <sub>3φ</sub>	AT	P	KAIC		
1	Mesh bag clipping machine, 3KW, 1Ø 220V 60HZ		1		230	3,000	13.04				60	2	10	2-5.5mm sq. THHN +1-3.5mm sq. GND	21mmØ PVC
2	Fruit & veg. sorting grading & packaging, 1-4KW & 2.6 KW		1		230	4,000		17.39			100	2	10	2-14mm sq. THHN +1-8mm sq. GND	27mmØ PVC
3	Fruit & veg., sorting grading, 1-4KW & 2.6 KW		1		230	4,000			17.39		100	2	10	2-14mm sq. THHN +1-8mm sq. GND	27mmØ PVC
4	Potato marbles & cherry tomato sorter 0.75 KW		2		230	1,500	6.52				30	2	10	2-5.5mm sq. THHN +1-3.5mm sq. GND	21mmØ PVC
5	Fruit & veg. wash line 2KW, 2.6 HP		1		230	2,000	8.70				40	2	10	2-8mm sq. THHN +1-5.5mm sq. GND	27mmØ PVC
6	Fresh veg. washing machine 0.75 KW		2		230	1,500			6.52		30	2	10	2-5.5mm sq. THHN +1-3.5mm sq. GND	21mmØ PVC
7	Root veg. bagger, packer machine 0.75KW		1		230	750			3.26		30	2	10	2-5.5mm sq. THHN +1-3.5mm sq. GND	21mmØ PVC
8	Sweet potato washing machine 0.75 KW		1		230	750			5.08		30	2	10	2-5.5mm sq. THHN +1-3.5mm sq. GND	21mmØ PVC
9	Veg. & fruit washing machine, 0.75KW		1		230	750	3.26				30	2	10	2-5.5mm sq. THHN +1-3.5mm sq. GND	21mmØ PVC
10	Horiz. Cont. band sealer, 0.69KW		1		230	690	3.00				30	2	10	2-5.5mm sq. THHN +1-3.5mm sq. GND	21mmØ PVC
11	Vert. cont. band sealer, 0.69KW		1		230	690		3.00			60	2	10	2-5.5mm sq. THHN +1-3.5mm sq. GND	21mmØ PVC
12	Conveyor belt machine, 3HP		3		230	6,714		29.19			60	2	10	2-8mm sq. THHN +1-5.5mm sq. GND	27mmØ PVC
13	Machine, 3Ø, 220V, 5KW		1		230	5,000				21	60	3	10	3-8mm sq. THHN +1-5.5mm sq. GND	27mmØ PVC
14	Machine, 3Ø, 220V, 5KW		1		230	5,000				21	60	3	10	3-8mm sq. THHN +1-5.5mm sq. GND	27mmØ PVC
15	Machine, 3Ø, 220V, 5KW		1		230	5,000				21	60	3	10	3-8mm sq. THHN +1-5.5mm sq. GND	27mmØ PVC
16	Water Pump, 0.75 HP		1		230	559.50	2.43								
17	Fire Alarm Panel		1		230	1,000.00	4.35								
	SPARE		1		230	4,000.00	17.39								
	SPARE		1		230	4,000.00	17.39								
	<b>SUBTOTAL (PART B)</b>					<b>50,904</b>	<b>76.08</b>	<b>49.58</b>	<b>32.25</b>	<b>63.00</b>	<b>175.00</b>	<b>3</b>	<b>22</b>	<b>3-50mm sq. THHN +1-22mm sq. GND</b>	<b>41mm dia RSC</b>
	<b>GRAND TOTAL (PART A + PART B)</b>					<b>59,039.50</b>	<b>111.46</b>	<b>49.58</b>	<b>32.25</b>	<b>63.00</b>					

COMPUTATION: (PB-2)	COMPUTATION: (TOTALIZER)
ITOT at 80% D.F. = $[(60.164 \times 1.732) + 63] \times 0.80 + 25\% \times 21A = 139.01$ Amps	ITOT @80% D.F. = $(111.46 \times 1.732 + 63) \times 0.80 + (25\% \times 21A) = 210.09$ Amps
USE: 3-50mm sq. THHN + 1-22mm sq. GND for feeder conductor 175AT, 3P, 240V, 10KAIC for service equipment	USE: 3-80mm sq. THHN + 1-22 mm sq. GND for service entrance
NOTE: $KVA = \frac{KW}{PF}$	MAIN BREAKER
	USE: 225 AT, 3P, 240V, 22 KAIC for main service protection
$I = \frac{KW \times 1000}{220V \times PF}$	KVA TOTAL = $\frac{210.09 \times 230V \times 1.732}{1000} = 83.69$ KVA
	USE: 3-37.5 KVA Distribution Transformer

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