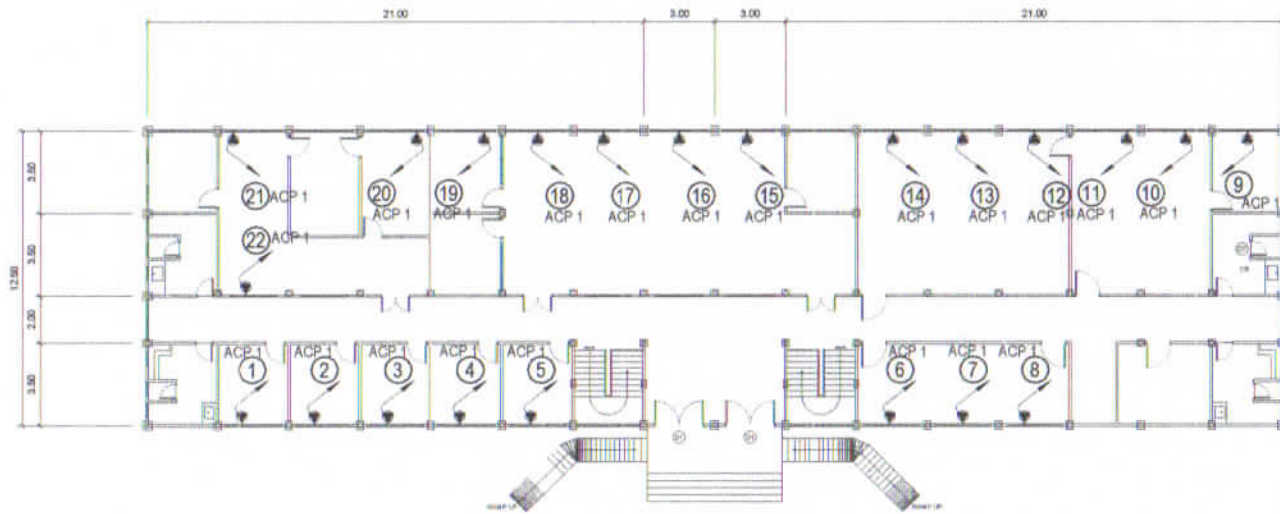


LOWER GROUND FLOOR

SCALE

1 : 300 M

CROP SCIENCE BUILDING




UPPER GROUND FLOOR
 SCALE 1 : 300 M

CROP SCIENCE BUILDING

PANEL BOARD: ACP1
ENCLOSURE: NEMA-1
MOUNTING: SURFACE MOUNTED
WITH DEAD FRONT COVER

MAIN FEEDER WIRES:
3 - 38.0 SQ. MM THHN
1 - 14 SQ. MM THHN (GROUND)
IN 40 mm Dia. CONDUIT

MAIN CB:
150 AT/ 225AF, 3P, MCCB, 18 kAIC, 230V, 60 HZ
4- WIRES & 1 WIRE GROUND
SURFACE MOUNTED WITH DEAD FRONT COVER

CKT NO.	NO. OF OUTLETS/ ACP NO.	CIRCUIT DESCRIPTION	LOAD (VA)	VOLTS	AMPERE LOAD				PROTECTION			POLE	SET	L & N 90 MM THHN	G 90 MM THHN	C (IMC) mm Dia
					AB	BC	CA	ABC	AT	AF	kAIC					
1	ACP 1	ACU OUTLET, 1.5HP	1500	230	8.00				30	100	10	2	1	2 - 3.5	1G 2.0	RSC, 15
2	ACP 2	ACU OUTLET, 1.5HP	1500	230	8.00				30	100	10	2	1	2 - 3.5	1G 2.0	RSC, 15
3	ACP 3	ACU OUTLET, 1.5HP	1500	230		8.00			30	100	10	2	1	2 - 3.5	1G 2.0	RSC, 15
4	ACP 4	ACU OUTLET, 1.5HP	1500	230		8.00			30	100	10	2	1	2 - 3.5	1G 2.0	RSC, 15
5	ACP 5	ACU OUTLET, 1.5HP	1500	230			8.00		30	100	10	2	1	2 - 3.5	1G 2.0	RSC, 15
6	ACP 6	ACU OUTLET, 1.5HP	1500	230			8.00		30	100	10	2	1	2 - 3.5	1G 2.0	RSC, 15
7	ACP 7	ACU OUTLET, 1.5HP	1500	230	8.00				30	100	10	2	1	2 - 3.5	1G 2.0	RSC, 15
8	ACP 8	ACU OUTLET, 1.5HP	1500	230	8.00				30	100	10	2	1	2 - 3.5	1G 2.0	RSC, 15
9	ACP 9	ACU OUTLET, 1.5HP	1500	230		8.00			30	100	10	2	1	2 - 3.5	1G 2.0	RSC, 15
10	ACP 10	ACU OUTLET, 1.5HP	1500	230		8.00			30	100	10	2	1	2 - 3.5	1G 2.0	RSC, 15
11	ACP 11	ACU OUTLET, 1.5HP	1500	230			8.00		30	100	10	2	1	2 - 3.5	1G 2.0	RSC, 15
12	ACP 12	ACU OUTLET, 1.5HP	1500	230			8.00		30	100	10	2	1	2 - 3.5	1G 2.0	RSC, 15
13	ACP 13	ACU OUTLET, 1.5HP	1500	230	8.00				30	100	10	2	1	2 - 3.5	1G 2.0	RSC, 15
14	ACP 14	ACU OUTLET, 1.5HP	1500	230	8.00				30	100	10	2	1	2 - 3.5	1G 2.0	RSC, 15
15	ACP 15	ACU OUTLET, 1.5HP	1500	230		8.00			30	100	10	2	1	2 - 3.5	1G 2.0	RSC, 15
16	ACP 16	ACU OUTLET, 1.5HP	1500	230		8.00			30	100	10	2	1	2 - 3.5	1G 2.0	RSC, 15
17	ACP 17	ACU OUTLET, 1.5HP	1500	230			8.00		30	100	10	2	1	2 - 3.5	1G 2.0	RSC, 15
18	ACP 18	ACU OUTLET, 1.5HP	1500	230			8.00		30	100	10	2	1	2 - 3.5	1G 2.0	RSC, 15
19	ACP 19	ACU OUTLET, 1.5HP	1500	230	8.00				30	100	10	2	1	2 - 3.5	1G 2.0	RSC, 15
20	ACP 20	ACU OUTLET, 1.5HP	1500	230	8.00				30	100	10	2	1	2 - 3.5	1G 2.0	RSC, 15
21	ACP 21	ACU OUTLET, 1.5HP	1500	230		8.00			30	100	10	2	1	2 - 3.5	1G 2.0	RSC, 15
22	ACP 22	ACU OUTLET, 1.5HP	1500	230		8.00			30	100	10	2	1	2 - 3.5	1G 2.0	RSC, 15
23		SPARE														
24		SPARE														
TOTAL			33000	230	64.00	64.00	48.00									

MAIN FEEDER and CURRENT PROTECTION COMPUTATION:

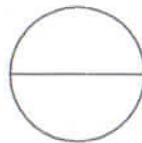
@ 80 % Demand Factor

$$I_{FL} = [1.732 \times 64 + 25\% \times 48] \text{ DF} = 112.85 \text{ Amperes}$$

use: 3 - 38.0 SQMM THHN + 1 - 14 SQMM THHN IN 40 MM DIA. IMC

$$I_{CB} = [1.732 \times 64 + 250\% \times 48] \text{ DF} = 135.85 \text{ Amperes}$$

use: 150AT, 100AF, 3P, 230V, 18 kAIC, CB



SCHEDULE OF LOADS

SCALE

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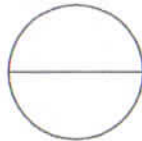
PANEL BOARD: ACP2 ENCLOSURE: NEMA-1 MOUNTING: SURFACE MOUNTED WITH DEAD FRONT COVER	MAIN FEEDER WIRES: 3 - 38.0 SQ. MM THHN 1 - 14 SQ. MM THHN (GROUND) IN 40 mm Dia. CONDUIT	MAIN CB: 150 AT/ 225AF, 3P, MCCB, 18 KAIC, 230V, 60 HZ 4- WIRES & 1 WIRE GROUND SURFACE MOUNTED WITH DEAD FRONT COVER
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CKT NO.	NO. OF OUTLETS/ ACP NO.	CIRCUIT DESCRIPTION	LOAD (VA)	VOLTS	AMPERE LOAD				PROTECTION			POLE	SET	L & N SQ. MM THHN	G SQ. MM THHN	C (IMC) mm Dia
					AB	BC	CA	ABC	AT	AF	KAIC					
1	ACP 1	ACU OUTLET, 1 SHP	1500	230	8.00				30	100	10	1	1	2 - 3.5	1G 2.0	RSC, 15
2	ACP 2	ACU OUTLET, 1 SHP	1500	230	8.00				30	100	10	1	1	2 - 3.5	1G 2.0	RSC, 15
3	ACP 3	ACU OUTLET, 1 SHP	1500	230		8.00			20	100	10	1	1	2 - 3.5	1G 2.0	RSC, 15
4	ACP 4	ACU OUTLET, 1 SHP	1500	230		8.00			20	100	10	1	1	2 - 3.5	1G 2.0	RSC, 15
5	ACP 5	ACU OUTLET, 1 SHP	1500	230			8.00		20	100	10	1	1	2 - 3.5	1G 2.0	RSC, 15
6	ACP 6	ACU OUTLET, 1 SHP	1500	230			8.00		30	100	10	1	1	2 - 3.5	1G 2.0	RSC, 15
7	ACP 7	ACU OUTLET, 1 SHP	1500	230	8.00				30	100	10	1	1	2 - 3.5	1G 2.0	RSC, 15
8	ACP 8	ACU OUTLET, 1 SHP	1500	230	8.00				30	100	10	1	1	2 - 3.5	1G 2.0	RSC, 15
9	ACP 9	ACU OUTLET, 1 SHP	1500	230		8.00			30	100	10	1	1	2 - 3.5	1G 2.0	RSC, 15
10	ACP 10	ACU OUTLET, 1 SHP	1500	230		8.00			30	100	10	1	1	2 - 3.5	1G 2.0	RSC, 15
11	ACP 11	ACU OUTLET, 1 SHP	1500	230			8.00		30	100	10	1	1	2 - 3.5	1G 2.0	RSC, 15
12	ACP 12	ACU OUTLET, 1 SHP	1500	230			8.00		30	100	10	1	1	2 - 3.5	1G 2.0	RSC, 15
13	ACP 13	ACU OUTLET, 1 SHP	1500	230	8.00				30	100	10	1	1	2 - 3.5	1G 2.0	RSC, 15
14	ACP 14	ACU OUTLET, 1 SHP	1500	230	8.00				30	100	10	1	1	2 - 3.5	1G 2.0	RSC, 15
15	ACP 15	ACU OUTLET, 1 SHP	1500	230		8.00			30	100	10	1	1	2 - 3.5	1G 2.0	RSC, 15
16	ACP 16	ACU OUTLET, 1 SHP	1500	230		8.00			30	100	10	1	1	2 - 3.5	1G 2.0	RSC, 15
17	ACP 17	ACU OUTLET, 1 SHP	1500	230			8.00		30	100	10	1	1	2 - 3.5	1G 2.0	RSC, 15
18	ACP 18	ACU OUTLET, 1 SHP	1500	230			8.00		30	100	10	1	1	2 - 3.5	1G 2.0	RSC, 15
19	ACP 19	ACU OUTLET, 1 SHP	1500	230	8.00				30	100	10	1	1	2 - 3.5	1G 2.0	RSC, 15
20	ACP 20	ACU OUTLET, 1 SHP	1500	230	8.00				30	100	10	1	1	2 - 3.5	1G 2.0	RSC, 15
21	ACP 21	ACU OUTLET, 1 SHP	1500	230		8.00			30	100	10	1	1	2 - 3.5	1G 2.0	RSC, 15
22	ACP 22	ACU OUTLET, 1 SHP	1500	230		8.00			30	100	10	1	1	2 - 3.5	1G 2.0	RSC, 15
23	ACP 23	ACU OUTLET, 1 SHP	1500	230			8.00		30	100	10	1	1	2 - 3.5	1G 2.0	RSC, 15
24	ACP 24	ACU OUTLET, 1 SHP	1500	230			8.00		30	100	10	1	1	2 - 3.5	1G 2.0	RSC, 15
25	ACP 25	ACU OUTLET, 1 SHP	1500	230	8.00				30	100	10	1	1	2 - 3.5	1G 2.0	RSC, 15
26	ACP 26	ACU OUTLET, 1 SHP	1500	230	8.00				30	100	10	1	1	2 - 3.5	1G 2.0	RSC, 15
27	ACP 27	ACU OUTLET, 1 SHP	1500	230		8.00			30	100	10	1	1	2 - 3.5	1G 2.0	RSC, 15
28	ACP 28	ACU OUTLET, 1 SHP	1500	230		8.00			30	100	10	1	1	2 - 3.5	1G 2.0	RSC, 15
29		SPARE														
30		SPARE														
		TOTAL	42000	230	80.00	80.00	64.00									

MAIN FEEDER and CURRENT PROTECTION COMPUTATION

@ 80 % Demand Factor
 $I_{FL} = \frac{[1,732 \times 80 + 250\% \times m]}{DF} = 140.56 \text{ Amperes}$
 use: **3 - 50.0 SQMM THHN + 1 - 14 SQMM THHN IN 40 MM DIA. IMC**

$I_{cb} = \frac{[1,732 \times 80 + 250\% \times m]}{DF} = 163.56 \text{ Amperes}$
 use: **175AT, 225AF, 3P, 230V, 18 KAIC, CB**



SCHEDULE OF LOADS

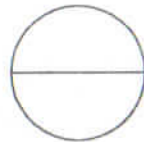
SCALE

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CROP SCIENCE BUILDING

PANEL BOARD: NEW PANEL BOARD: MDP ENCLOSURE: NEMA-1 MOUNTING: SURFACE MOUNTED WITH DEAD FRONT COVER		MAIN FEEDER WIRES: 4 - 150.0 SQ. MM THHN (LINE & NEUTRAL) 1 - 30 SQ. MM THHN (GROUND) IN 32 mm Dia. CONDUIT			MAIN CB: 300 AT/ 300AF, 3P, MCCB SCHNEIDER/ SQUARE D , 18 KAIC, 400V, 60 HZ 4- WIRES & 1 WIRE GROUND SURFACE MOUNTED WITH DEAD FRONT COVER											
CKT NO	PANEL CODE	PANEL DESCRIPTION	LOAD (VA)	VOLTS	AMPERE LOAD			PROTECTION			POLE	SET	L & N 90. MM THHN	G SQ. MM THHN	C (IMC) mm Dia	
					AN	BN	CN	ABC	AT	AF						KAIC
1	LP1	LIGHTING ANF POWER # 1	5000	230	21.74	21.74	21.74		70	100	18	3	1	3 - 14.0	1G 5.5	RSC, 25
2	LP2	LIGHTING ANF POWER # 2	5000	230	21.74	21.74	21.74		70	100	18	3	1	3 - 14.0	1G 5.5	RSC, 25
3	ACP1	AIR COND PANEL 1	33000	230	64.00	64.00	48.00		150	225	18	3	1	3 - 38.0	1G 14.0	RSC, 40
4	ACP2	AIR COND PANEL 2	42000	230	80.00	80.00	64.00		175	225	18	3	1	3 - 50.0	1G 22	RSC, 80
5		SPARE	-	-												
6		SPARE	-	-												
		TOTAL	85000	230	187.5	187.5	155.5									

MAIN FEEDER and CURRENT PROTECTION COMPUTATION:
 @ 80 % Demand Factor
 $I_{FL} = \frac{[1.732 \times 131.94 \times 25\% \times m]}{DvF} = 405.94 \text{ Amperes}$
 use: 3 - 250.0 SQMM THHN + 1 - 30 SQMM THHN IN 80 MM DIA. IMC
 $I_{CB} = \frac{[1.732 \times 1312.9 \times 250\% \times m]}{DvF} = 429.86 \text{ Amperes}$
 use: 450AT, 500AF, 3P, 230V, 38 KAIC, CB



SCHEDULE OF LOADS

SCALE

N.T.S.

CROP SCIENCE BUILDING

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Bid Bulletin (3-10-2)