SCHEDULE OF LOADS AND COMPUTATION

PANEL : LP1 (LIGHTING AND POWER PANEL 1)
PHASE: 3
VOLTS: 230

CABLE: 3 - 14.0 SQMM THHN+ 1 - 8.0 SQMM THHN
CONDUIT: PVC, 25 MM DIA.
LOCATION: ELECTRICAL ROOM, GROUND FLOOR

MAIN: 70 AT, 100 AF, 3P, 230V,MCCB
ENCLOSURE : NEMA 1
MOUNTING: SURFACE

CKT NO.	CIRCUIT DESCRIPTION	NO OF OUTLET	LOAD IN RATING						CIRCUIT PROTECTION	Size of Conductor		Size Of Conduit In MM ø	Color Code
			WATTAGE	VOLTAGE	AMPERES				CIRCUIT BREAKER RATING	SQ. MM THHN	SQ. MM THHN(G)		
					3 ø	AB	CA	BC					
1	LIGHTING OUTLET (5 FL + 19 SLED)	24	1920	230		8.35			15AT, 2P, 230V, MCCB	2 - 2.0		PVC, 20	1R,1B
2	LIGHTING OUTLET (9 DLED)	9	720	230		3.13			15AT, 2P, 230V, MCCB	2 - 2.0		PVC, 20	1R,1B
3	LIGHTING OUTLET (19 FL + 10 SLED)	29	2320	230			10.09		15AT, 2P, 230V, MCCB	2 - 2.0		PVC, 20	1B,1Y
4	LIGHTING OUTLET (3 FL + 2 SLED + 10 DLED)	15	1500	230			6.52		15AT, 2P, 230V, MCCB	2 - 2.0		PVC, 20	1B,1Y
5	LIGHTING OUTLET (2 SLED + 12 DLED)	14	1400	230				6.09	15AT, 2P, 230V, MCCB	2 - 2.0		PVC, 20	1Y,1R
6	CONVENIENCE OUTLET	9	1980	230				8.61	20AT, 2P, 230V, MCCB	2 - 3.5	+ G 2.0	PVC, 20	1Y,1R,G
7	CONVENIENCE OUTLET	10	2200	230		9.57			20AT, 2P, 230V, MCCB	2 - 3.5	+ G 2.0	PVC, 20	1R,1B,G
	SPARE												
8	CONVENIENCE OUTLET	12	2640	230			11.48		20AT, 2P, 230V, MCCB	2 - 3.5	+ G 2.0	PVC, 20	1B,1Y,G
	SPARE												
9	CONVENIENCE OUTLET	13	2860	230				12.43	20AT, 2P, 230V, MCCB	2 - 3.5	+ G 2.0	PVC, 20	1Y,1R,G
	SPARE												
	TOTAL		17540	230	0	21	28	27	70 AT, 3P, 230V, MCCB	3 - 14.0	+ G 8.0	PVC, 25	1R,1B,1Y,G

MAIN FEEDER and CURRENT PROTECTION COMPUTATION:

NOTE:

I_{FL} = [(27 x 1.732) x DF = 46.76 *Amperes*

I_{CB} = [(27 x 1.732) x DF = 46.76 *Amperes*

G - Means Ground Wire
1R- Color RED
1B- Color BLACK
1Y- Color YELLOW
1G- Color GREEN

use: 3 - 14.0 SQMM THHN+ 1 - 8.0 SQMM THHN IN 25 MM DIA. PVC
use: 70 AT, 100AF, 3P, 230V,MCCB

This Electrical Design is good only for the above connected loads.
Any additional electrical load connection in the future is not allowed,
Except redesign of electrical load system will be done.

PANEL : LP2 (LIGHTING AND POWER PANEL 2)
PHASE: 3
VOLTS: 230

CABLE: 3 - 14.0 SQMM THHN+ 1 - 8.0 SQMM THHN
CONDUIT: PVC, 25 MM DIA.
LOCATION: ELECTRICAL ROOM, SECOND FLOOR

MAIN: 70 AT, 100 AF, 3P, 230V,MCCB
ENCLOSURE : NEMA 1
MOUNTING: SURFACE

CKT NO.	CIRCUIT DESCRIPTION	NO OF OUTLET	LOAD IN RATING						CIRCUIT PROTECTION	Size of Conductor		Size Of Conduit In MM ø	Color Code
			WATTAGE	VOLTAGE	AMPERES				CIRCUIT BREAKER RATING	SQ. MM THHN	SQ. MM THHN(G)		
					3 ø	AB	CA	BC					
1	LIGHTING OUTLET (9 FL + 15 SLED)	24	1920	230		8.35			15AT, 2P, 230V, MCCB	2 - 2.0		PVC, 20	1R,1B
2	LIGHTING OUTLET (12 FL + 6 SLED)	18	1440	230		6.26			15AT, 2P, 230V, MCCB	2 - 2.0		PVC, 20	1R,1B
3	LIGHTING OUTLET (1 FL + 5 SLED + 8 DLED)	14	1120	230			4.87		15AT, 2P, 230V, MCCB	2 - 2.0		PVC, 20	1B,1Y
4	LIGHTING OUTLET (2 FL + 6 SLED + 8 DLED)	16	1600	230			6.96		15AT, 2P, 230V, MCCB	2 - 2.0		PVC, 20	1B,1Y
5	LIGHTING OUTLET (16 DLED)	16	1600	230				6.96	15AT, 2P, 230V, MCCB	2 - 2.0		PVC, 20	1Y,1R
6	LIGHTING OUTLET (16 DLED)	16	1600	230				6.96	15AT, 2P, 230V, MCCB	2 - 2.0		PVC, 20	1Y,1R
7	CONVENIENCE OUTLET	11	2420	230		10.52			20AT, 2P, 230V, MCCB	2 - 3.5	+ G 2.0	PVC, 20	1R,1B,G
8	CONVENIENCE OUTLET	11	2420	230		10.52			20AT, 2P, 230V, MCCB	2 - 3.5	+ G 2.0	PVC, 20	1R,1B,G
9	CONVENIENCE OUTLET	14	3080	230			13.39		20AT, 2P, 230V, MCCB	2 - 3.5	+ G 2.0	PVC, 20	1B,1Y,G
10	CONVENIENCE OUTLET	14	3080	230			13.39		20AT, 2P, 230V, MCCB	2 - 3.5	+ G 2.0	PVC, 20	1B,1Y,G
11	CONVENIENCE OUTLET	8	1760	230				7.65	20AT, 2P, 230V, MCCB	2 - 3.5	+ G 2.0	PVC, 20	1Y,1R,G
12	CONVENIENCE OUTLET	8	1760	230				7.65	20AT, 2P, 230V, MCCB	2 - 3.5	+ G 2.0	PVC, 20	1Y,1R,G
13	CONVENIENCE OUTLET	8	1760	230				7.65	20AT, 2P, 230V, MCCB	2 - 3.5	+ G 2.0	PVC, 20	1Y,1R,G
	SPARE												
	TOTAL		25560	230	0	36	39	37	70 AT, 3P, 230V, MCCB	3 - 14.0	+ G 8.0	PVC, 25	1R,1B,1Y,G

MAIN FEEDER and CURRENT PROTECTION COMPUTATION:

NOTE:

I_{FL} = [(37 x 1.732) x DF = 64.08 *Amperes*

I_{CB} = [(37 x 1.732) x DF = 64.08 *Amperes*

G - Means Ground Wire
1R- Color RED
1B- Color BLACK
1Y- Color YELLOW
1G- Color GREEN

use: 3 - 14.0 SQMM THHN+ 1 - 8.0 SQMM THHN IN 25 MM DIA. PVC
use: 70 AT, 100AF, 3P, 230V,MCCB

This Electrical Design is good only for the above connected loads.
Any additional electrical load connection in the future is not allowed,
Except redesign of electrical load system will be done.

PREPARED BY:	END USER:	REVIEWED BY:		ENDORSED BY:	REC. APPROVAL:		APPROVED BY:	PROJECT TITLE/ LOCATION:	IMPLEMENTING AGENCY:	SHT NO:
R.J.R. SANCHEZ PDU OVPPD	C.J. BAESA CAMPUS ADMINISTRATOR CAVITE CITY	[illegible] PROF. ELEC. ENGINEER	S. B. BAYOT JR. HEAD PDU	O. B. DELOS REYES DIRECTOR PLANNING AND DEVT. OFFICE	A. G. MAGCAWAS VPPD CVSU	J. X. B. NEPOMUCENO VPASS CVSU	J. X. B. NEPOMUCENO OIC CVSU	REHABILITATION OF ACADEMIC BUILDING AT CVSU CAVITE CITY (ADDITIONAL ELECTRICAL PLAN) CAVITE STATE UNIVERSITY CAVITE CITY	CAVITE STATE UNIVERSITY	E - 15

PANEL : LP3 (LIGHTING AND POWER PANEL 3)
PHASE: 3
VOLTS: 230

CABLE: 3 - 38.0 SQMM THHN+ 1 - 14.0 SQMM THHN
CONDUIT: PVC, 40 MM DIA.
LOCATION: ELECTRICAL ROOM, THIRD FLOOR

MAIN: 125 AT, 200 AF, 3P, 230V,MCCB
ENCLOSURE : NEMA 1
MOUNTING: SURFACE

CKT N0.	CIRCUIT DESCRIPTION	NO OF OUTLET	LOAD IN RATING						CIRCUIT PROTECTION	Size of Conductor		Size Of Conduit In MM ø	Color Code
			WATTAGE	VOLTAGE	AMPERES 3 ø	AB	CA	BC	CIRCUIT BREAKER RATING	SQ. MM THHN	SQ. MM THHN(G)		
1	LIGHTING OUTLET (9 PL + 15 SLED)	24	1920	230		8.35			15AT, 2P, 230V, MCCB	2 - 2.0		PVC, 20	1R,1B
2	LIGHTING OUTLET (12 PL + 6 SLED)	18	1440	230		6.26			15AT, 2P, 230V, MCCB	2 - 2.0		PVC, 20	1R,1B
3	LIGHTING OUTLET (1 PL + 5 SLED + 8 DLED)	14	1120	230			4.87		15AT, 2P, 230V, MCCB	2 - 2.0		PVC, 20	1B,1Y
4	LIGHTING OUTLET (2 PL + 6 SLED + 8 DLED)	16	1600	230			6.96		15AT, 2P, 230V, MCCB	2 - 2.0		PVC, 20	1B,1Y
5	LIGHTING OUTLET (16 DLED)	16	1600	230				6.96	15AT, 2P, 230V, MCCB	2 - 2.0		PVC, 20	1Y,1R
6	LIGHTING OUTLET (16 DLED)	16	1600	230				6.96	15AT, 2P, 230V, MCCB	2 - 2.0		PVC, 20	1Y,1R
7	CONVENIENCE OUTLET	5	1100	230		4.78			20AT, 2P, 230V, MCCB	2 - 3.5	+ G 2.0	PVC, 20	1R,1B,G
8	CONVENIENCE OUTLET	11	2420	230		10.52			20AT, 2P, 230V, MCCB	2 - 3.5	+ G 2.0	PVC, 20	1R,1B,G
9	CONVENIENCE OUTLET	10	2200	230			9.57		20AT, 2P, 230V, MCCB	2 - 3.5	+ G 2.0	PVC, 20	1B,1Y,G
10	CONVENIENCE OUTLET	14	3080	230			13.39		20AT, 2P, 230V, MCCB	2 - 3.5	+ G 2.0	PVC, 20	1B,1Y,G
11	CONVENIENCE OUTLET	8	1760	230				7.65	20AT, 2P, 230V, MCCB	2 - 3.5	+ G 2.0	PVC, 20	1Y,1R,G
12	CONVENIENCE OUTLET	8	1760	230				7.65	20AT, 2P, 230V, MCCB	2 - 3.5	+ G 2.0	PVC, 20	1Y,1R,G
13	CONVENIENCE OUTLET	8	1760	230		7.65			20AT, 2P, 230V, MCCB	2 - 3.5	+ G 2.0	PVC, 20	1R,1B,G
14	CONVENIENCE OUTLET	8	1760	230		7.65			20AT, 2P, 230V, MCCB	2 - 3.5	+ G 2.0	PVC, 20	1R,1B,G
15	CONVENIENCE OUTLET	8	1760	230			7.65		20AT, 2P, 230V, MCCB	2 - 3.5	+ G 2.0	PVC, 20	1B,1Y,G
16	CONVENIENCE OUTLET	8	1760	230			7.65		20AT, 2P, 230V, MCCB	2 - 3.5	+ G 2.0	PVC, 20	1B,1Y,G
17	CONVENIENCE OUTLET	8	1760	230				7.65	20AT, 2P, 230V, MCCB	2 - 3.5	+ G 2.0	PVC, 20	1Y,1R,G
18	CONVENIENCE OUTLET	8	1760	230				7.65	20AT, 2P, 230V, MCCB	2 - 3.5	+ G 2.0	PVC, 20	1Y,1R,G
19	CONVENIENCE OUTLET	8	1760	230		7.65			20AT, 2P, 230V, MCCB	2 - 3.5	+ G 2.0	PVC, 20	1R,1B,G
20	CONVENIENCE OUTLET	8	1760	230		7.65			20AT, 2P, 230V, MCCB	2 - 3.5	+ G 2.0	PVC, 20	1R,1B,G
21	CONVENIENCE OUTLET	8	1760	230			7.65		20AT, 2P, 230V, MCCB	2 - 3.5	+ G 2.0	PVC, 20	1B,1Y,G
	SPARE												
22	CONVENIENCE OUTLET	8	1760	230				7.65	20AT, 2P, 230V, MCCB	2 - 3.5	+ G 2.0	PVC, 20	1B,1Y,G
	SPARE												
	TOTAL		39200	230	0	61	58	52	125 AT, 3P, 230V, MCCB	3 - 38.0	+ G 14.0	PVC, 40	1R,1B,1Y,G

MAIN FEEDER and CURRENT PROTECTION COMPUTATION:

NOTE:

I_{FL} = [(61 x 1.732) x DF = 105.65 *Amperes*

I_{CB} = [(61 x 1.732) x DF = 105.65 *Amperes*

G - Means Ground Wire
1R- Color RED
1B- Color BLACK
1Y- Color YELLOW
1G- Color GREEN

use: 3 - 38.0 SQMM THHN+ 1 - 14.0 SQMM THHN IN 40 MM DIA. PVC
use: 125 AT, 200AF, 3P, 230V,MCCB

This Electrical Design is good only for the above connected loads.
Any additional electrical load connection in the future is not allowed,
Except redesign of electrical load system will be done.

PANEL : LP4 (LIGHTING AND POWER PANEL 4)
PHASE: 3
VOLTS: 230

CABLE: 3 - 14.0 SQMM THHN+ 1 - 8.0 SQMM THHN
CONDUIT: PVC, 25 MM DIA.
LOCATION: STORAGE ROOM, FOURTH FLOOR

MAIN: 50 AT, 100 AF, 3P, 230V,MCCB
ENCLOSURE : NEMA 1
MOUNTING: SURFACE

CKT N0.	CIRCUIT DESCRIPTION	NO OF OUTLET	LOAD IN RATING						CIRCUIT PROTECTION	Size of Conductor		Size Of Conduit In MM ø	Color Code
			WATTAGE	VOLTAGE	AMPERES 3 ø	AB	CA	BC	CIRCUIT BREAKER RATING	SQ. MM THHN	SQ. MM THHN(G)		
1	LIGHTING OUTLET (15 PL + 7 SLED)	22	1760	230		7.85			15AT, 2P, 230V, MCCB	2 - 2.0		PVC, 20	1R,1B
2	LIGHTING OUTLET (12 PL + 6 SLED)	18	1440	230		6.26			15AT, 2P, 230V, MCCB	2 - 2.0		PVC, 20	1R,1B
3	LIGHTING OUTLET (4 HB)	4	800	230			3.48		15AT, 2P, 230V, MCCB	2 - 2.0		PVC, 20	1B,1Y
4	LIGHTING OUTLET (4 HB)	4	800	230			3.48		15AT, 2P, 230V, MCCB	2 - 2.0		PVC, 20	1B,1Y
5	LIGHTING OUTLET (4 HB)	4	800	230				3.48	15AT, 2P, 230V, MCCB	2 - 2.0		PVC, 20	1Y,1R
6	LIGHTING OUTLET (2 SLED + 3 HB)	5	1000	230				4.35	15AT, 2P, 230V, MCCB	2 - 2.0		PVC, 20	1Y,1R
7	CONVENIENCE OUTLET	1	220	230		0.96			20AT, 2P, 230V, MCCB	2 - 3.5	+ G 2.0	PVC, 20	1R,1B,G
	SPARE												
8	CONVENIENCE OUTLET	6	1320	230			5.74		20AT, 2P, 230V, MCCB	2 - 3.5	+ G 2.0	PVC, 20	1B,1Y,G
	SPARE												
9	CONVENIENCE OUTLET	7	1540	230				6.70	20AT, 2P, 230V, MCCB	2 - 3.5	+ G 2.0	PVC, 20	1Y,1R,G
	SPARE												
	TOTAL		9680	230	0	15	13	15	50 AT, 3P, 230V, MCCB	3 - 14.0	+ G 8.0	PVC, 25	1R,1B,1Y,G

MAIN FEEDER and CURRENT PROTECTION COMPUTATION:

NOTE:

I_{FL} = [(15 x 1.732) x DF = 25.98 *Amperes*

I_{CB} = [(15 x 1.732) x DF = 25.98 *Amperes*

G - Means Ground Wire
1R- Color RED
1B- Color BLACK
1Y- Color YELLOW
1G- Color GREEN

use: 3 - 14.0 SQMM THHN+ 1 - 8.0 SQMM THHN IN 25 MM DIA. PVC
use: 50 AT, 100AF, 3P, 230V,MCCB

This Electrical Design is good only for the above connected loads.
Any additional electrical load connection in the future is not allowed,
Except redesign of electrical load system will be done.

PREPARED BY:	END USER:	REVIEWED BY:		ENDORSED BY:	REC. APPROVAL:		APPROVED BY:	PROJECT TITLE/ LOCATION:	IMPLEMENTING AGENCY:	SHT NO:
R.J.R. SANCHEZ PDU CVPPD	C.J. BAESA CAMPUS ADMINISTRATOR CAVITE CITY	R. LOZADA PROF. ELEC. ENGINEER	S. B. BAYOT JR. HEAD PDU	O. B. DELOS REYES DIRECTOR PLANNING AND DEVT. OFFICE	A. G. MAGDAWAS VPPD CVSU	J. X. B. NEPOMUCENO VPASS CVSU	J. X. B. NEPOMUCENO OIC CVSU	REHABILITATION OF ACADEMIC BUILDING AT CVSU CAVITE CITY (ADDITIONAL ELECTRICAL PLAN) CAVITE STATE UNIVERSITY CAVITE CITY	CAVITE STATE UNIVERSITY	E - 16

PANEL : PP1 (POWER PANEL 1)
CABLE: 3 - 80.0 SQMM THHN+ 1 - 22.0 SQMM THHN
CONDUIT: PVC, 50 MM DIA.
MAIN: 200 AT, 300 AF, 3P, 230V,MCCB
ENCLOSURE : NEMA 1
MOUNTING: SURFACE
PHASE: 3
VOLTS: 230
LOCATION: ELECTRICAL ROOM, GROUND FLOOR

CKT N0.	CIRCUIT DESCRIPTION	NO OF OUTLET	LOAD IN RATING						CIRCUIT PROTECTION	Size of Conductor			Size Of Conduit In MM ø	Color Code
			WATTAGE	VOLTAGE	AMPERES 3 ø	AB	CA	BC	CIRCUIT BREAKER RATING	SQ. MM THHN		SQ. MM THHN(G)		
1	CEILING MOUNTED AIR VENTILATION	8	2400	230		10.43			30AT, 2P, 230V, MCCB	2 - 3 .5	+	G 2.0	PVC, 20	1R,1B,G
2	CEILING MOUNTED AIR VENTILATION	7	2100	230		9.13			30AT, 2P, 230V, MCCB	2 - 3 .5	+	G 2.0	PVC, 20	1R,1B,G
3	ACU POWER OUTLET (2.0 HP)	1	1500	230			12.00		30AT, 2P, 230V, MCCB	2 - 3 .5	+	G 2.0	PVC, 20	1B,1Y,G
4	ACU POWER OUTLET (3.0 HP)	1	2300	230			17.00		40AT, 2P, 230V, MCCB	2 - 5.5	+	G 2.0	PVC, 20	1B,1Y,G
5	ACU POWER OUTLET (3.0 HP)	1	2300	230				17.00	40AT, 2P, 230V, MCCB	2 - 5.5	+	G 2.0	PVC, 20	1Y,1R,G
6	ACU POWER OUTLET (3.0 HP)	1	2300	230				17.00	40AT, 2P, 230V, MCCB	2 - 5.5	+	G 2.0	PVC, 20	1Y,1R,G
7	ACU POWER OUTLET (3.0 HP)	1	2300	230		17.00			40AT, 2P, 230V, MCCB	2 - 5.5	+	G 2.0	PVC, 20	1R,1B,G
8	ACU POWER OUTLET (3.0 HP)	1	2300	230		17.00			40AT, 2P, 230V, MCCB	2 - 5.5	+	G 2.0	PVC, 20	1R,1B,G
9	ACU POWER OUTLET (3.0 HP)	1	2300	230			17.00		40AT, 2P, 230V, MCCB	2 - 5.5	+	G 2.0	PVC, 20	1B,1Y,G
10	ACU POWER OUTLET (3.0 HP)	1	2300	230			17.00		40AT, 2P, 230V, MCCB	2 - 5.5	+	G 2.0	PVC, 20	1B,1Y,G
11	ACU POWER OUTLET (3.0 HP)	1	2300	230				17.00	40AT, 2P, 230V, MCCB	2 - 5.5	+	G 2.0	PVC, 20	1Y,1R,G
12	ACU POWER OUTLET (3.0 HP)	1	2300	230				17.00	40AT, 2P, 230V, MCCB	2 - 5.5	+	G 2.0	PVC, 20	1Y,1R,G
13	ACU POWER OUTLET (3.0 HP)	1	2300	230		17.00			40AT, 2P, 230V, MCCB	2 - 5.5	+	G 2.0	PVC, 20	1R,1B,G
	SPARE													
14	ACU POWER OUTLET (3.0 HP)	1	2300	230			17.00		40AT, 2P, 230V, MCCB	2 - 5.5	+	G 2.0	PVC, 20	1B,1Y,G
	SPARE													
15	ACU POWER OUTLET (3.0 HP)	1	2300	230				17.00	40AT, 2P, 230V, MCCB	2 - 5.5	+	G 2.0	PVC, 20	1Y,1R,G
	SPARE													
	TOTAL		33600	230	0	71	80	85	200 AT, 3P, 230V, MCCB	3 - 80.0	+	G 22.0	PVC, 50	1R,1B,1Y,G

MAIN FEEDER and CURRENT PROTECTION COMPUTATION:

NOTE:

I_{FL} = [(85 x 1.732)) + (125% x Im)] x DF = 168.47 *Amperes*

I_{CB} = [(85 x 1.732)) + (250% x Im)] x DF = 189.72 *Amperes*

G - Means Ground Wire
1R- Color RED
1B- Color BLACK
1Y- Color YELLOW
1G- Color GREEN

use: 3 - 80.0 SQMM THHN+ 1 - 22.0 SQMM THHN IN 50 MM DIA. PVC
use: 200 AT, 300AF, 3P, 230V,MCCB

This Electrical Design is good only for the above connected loads.
Any additional electrical load connection in the future is not allowed,
Except redesign of electrical load system will be done.

PANEL : PP2 (POWER PANEL 2)
CABLE: 3 - 80.0 SQMM THHN+ 1 - 22.0 SQMM THHN
CONDUIT: PVC, 50 MM DIA.
MAIN: 200 AT, 300 AF, 3P, 230V,MCCB
ENCLOSURE : NEMA 1
MOUNTING: SURFACE
PHASE: 3
VOLTS: 230
LOCATION: ELECTRICAL ROOM, SECOND FLOOR

CKT N0.	CIRCUIT DESCRIPTION	NO OF OUTLET	LOAD IN RATING						CIRCUIT PROTECTION	Size of Conductor			Size Of Conduit In MM ø	Color Code
			WATTAGE	VOLTAGE	AMPERES 3 ø	AB	CA	BC	CIRCUIT BREAKER RATING	SQ. MM THHN		SQ. MM THHN(G)		
1	CEILING MOUNTED AIR VENTILATION	12	3600	230		15.65			30AT, 2P, 230V, MCCB	2 - 3 .5	+	G 2.0	PVC, 20	1R,1B,G
2	CEILING MOUNTED AIR VENTILATION	12	3600	230		15.65			30AT, 2P, 230V, MCCB	2 - 3 .5	+	G 2.0	PVC, 20	1R,1B,G
3	ACU POWER OUTLET (2.0 HP)	1	1500	230			12.00		30AT, 2P, 230V, MCCB	2 - 3 .5	+	G 2.0	PVC, 20	1B,1Y,G
4	ACU POWER OUTLET (2.0 HP)	1	1500	230			12.00		30AT, 2P, 230V, MCCB	2 - 3 .5	+	G 2.0	PVC, 20	1B,1Y,G
5	ACU POWER OUTLET (3.0 HP)	1	2300	230				17.00	40AT, 2P, 230V, MCCB	2 - 5.5	+	G 2.0	PVC, 20	1Y,1R,G
6	ACU POWER OUTLET (3.0 HP)	1	2300	230				17.00	40AT, 2P, 230V, MCCB	2 - 5.5	+	G 2.0	PVC, 20	1Y,1R,G
7	ACU POWER OUTLET (1.5 HP)	1	1200	230		10.00			30AT, 2P, 230V, MCCB	2 - 3 .5	+	G 2.0	PVC, 20	1R,1B,G
8	ACU POWER OUTLET (1.5 HP)	1	1200	230		10.00			30AT, 2P, 230V, MCCB	2 - 3 .5	+	G 2.0	PVC, 20	1R,1B,G
9	ACU POWER OUTLET (2.0 HP)	1	1500	230			12.00		30AT, 2P, 230V, MCCB	2 - 3 .5	+	G 2.0	PVC, 20	1B,1Y,G
10	ACU POWER OUTLET (1.0 HP)	1	800	230			8.00		30AT, 2P, 230V, MCCB	2 - 3 .5	+	G 2.0	PVC, 20	1B,1Y,G
11	ACU POWER OUTLET (2.0 HP)	1	1500	230				12.00	30AT, 2P, 230V, MCCB	2 - 3 .5	+	G 2.0	PVC, 20	1Y,1R,G
12	ACU POWER OUTLET (1.5 HP)	1	800	230				10.00	30AT, 2P, 230V, MCCB	2 - 3 .5	+	G 2.0	PVC, 20	1Y,1R,G
13	ACU POWER OUTLET (1.5 HP)	1	1500	230		10.00			30AT, 2P, 230V, MCCB	2 - 3 .5	+	G 2.0	PVC, 20	1R,1B,G
	SPARE													
14	ACU POWER OUTLET (1.0 HP)	1	800	230			8.00		30AT, 2P, 230V, MCCB	2 - 3 .5	+	G 2.0	PVC, 20	1B,1Y,G
	SPARE													
	TOTAL		24100	230	0	61	52	56	200 AT, 3P, 230V, MCCB	3 - 80.0	+	G 22.0	PVC, 50	1R,1B,1Y,G

MAIN FEEDER and CURRENT PROTECTION COMPUTATION:

NOTE:

I_{FL} = [(61 x 1.732)) + (125% x Im)] x DF = 126.90 *Amperes*

I_{CB} = [(61 x 1.732)) + (250% x Im)] x DF = 148.15 *Amperes*

G - Means Ground Wire
1R- Color RED
1B- Color BLACK
1Y- Color YELLOW
1G- Color GREEN

use: 3 - 80.0 SQMM THHN+ 1 - 22.0 SQMM THHN IN 50 MM DIA. PVC
use: 200 AT, 300AF, 3P, 230V,MCCB

This Electrical Design is good only for the above connected loads.
Any additional electrical load connection in the future is not allowed,
Except redesign of electrical load system will be done.

PREPARED BY:	END USER:	REVIEWED BY:		ENDORSED BY:	REC. APPROVAL:		APPROVED BY:	PROJECT TITLE/ LOCATION:	IMPLEMENTING AGENCY:	SHT NO:
R.J.R. SANCHEZ PDU CVPPD	C.J. BAESA CAMPUS ADMINISTRATOR CAVITE CITY	B. P. PEÑA PROF. ELEC. ENGINEER	S. B. BAYOT JR. HEAD PDU	O. B. DELOS REYES DIRECTOR PLANNING AND DEVT. OFFICE	A. G. MAGCAWAS VPPD CVSU	J. X. B. NEPOMUCENO VPASS CVSU	J. X. B. NEPOMUCENO OIC CVSU	REHABILITATION OF ACADEMIC BUILDING AT CVSU CAVITE CITY (ADDITIONAL ELECTRICAL PLAN) CAVITE STATE UNIVERSITY CAVITE CITY	CAVITE STATE UNIVERSITY	E - 17

PANEL : PP3 (POWER PANEL 3)
PHASE: 3
VOLTS: 230

CABLE: 3 - 100.0 SQMM THHN+ 1 - 30.0 SQMM THHN
CONDUIT: PVC, 63 MM DIA.
LOCATION: ELECTRICAL ROOM, THIRD FLOOR

MAIN: 225 AT, 300 AF, 3P, 230V,MCCB
ENCLOSURE : NEMA 1
MOUNTING: SURFACE

CKT NO.	CIRCUIT DESCRIPTION	NO OF OUTLET	LOAD IN RATING						CIRCUIT PROTECTION	Size of Conductor			Size Of Conduit In MM ø	Color Code
			WATTAGE	VOLTAGE	AMPERES				CIRCUIT BREAKER RATING	SQ. MM THHN		SQ. MM THHN(G)		
					3 ø	AB	CA	BC						
1	CEILING MOUNTED AIR VENTILATION	12	3600	230		15.65			30AT, 2P, 230V, MCCB	2 - 3 .5	+	G 2.0	PVC, 20	1R,1B,G
2	ACU POWER OUTLET (2.0 HP)	1	1500	230		17.00			40AT, 2P, 230V, MCCB	2 - 5.5	+	G 2.0	PVC, 20	1R,1B,G
3	ACU POWER OUTLET (3.0 HP)	1	2300	230			17.00		40AT, 2P, 230V, MCCB	2 - 5.5	+	G 2.0	PVC, 20	1B,1Y,G
4	ACU POWER OUTLET (3.0 HP)	1	2300	230			17.00		40AT, 2P, 230V, MCCB	2 - 5.5	+	G 2.0	PVC, 20	1B,1Y,G
5	ACU POWER OUTLET (3.0 HP)	1	2300	230				17.00	40AT, 2P, 230V, MCCB	2 - 5.5	+	G 2.0	PVC, 20	1Y,1R,G
6	ACU POWER OUTLET (3.0 HP)	1	2300	230				17.00	40AT, 2P, 230V, MCCB	2 - 5.5	+	G 2.0	PVC, 20	1Y,1R,G
7	ACU POWER OUTLET (3.0 HP)	1	2300	230		17.00			40AT, 2P, 230V, MCCB	2 - 5.5	+	G 2.0	PVC, 20	1R,1B,G
8	ACU POWER OUTLET (1.5 HP)	1	1500	230		10.00			30AT, 2P, 230V, MCCB	2 - 3.5	+	G 2.0	PVC, 20	1R,1B,G
9	ACU POWER OUTLET (1.5 HP)	1	1500	230			10.00		30AT, 2P, 230V, MCCB	2 - 3.5	+	G 2.0	PVC, 20	1B,1Y,G
10	ACU POWER OUTLET (1.0 HP)	1	800	230			12.00		30AT, 2P, 230V, MCCB	2 - 3.5	+	G 2.0	PVC, 20	1B,1Y,G
11	ACU POWER OUTLET (3.0 HP)	1	2300	230				17.00	40AT, 2P, 230V, MCCB	2 - 5.5	+	G 2.0	PVC, 20	1Y,1R,G
12	ACU POWER OUTLET (3.0 HP)	1	2300	230				17.00	40AT, 2P, 230V, MCCB	2 - 5.5	+	G 2.0	PVC, 20	1Y,1R,G
13	ACU POWER OUTLET (3.0 HP)	1	2300	230		17.00			40AT, 2P, 230V, MCCB	2 - 5.5	+	G 2.0	PVC, 20	1R,1B,G
14	ACU POWER OUTLET (3.0 HP)	1	2300	230		17.00			40AT, 2P, 230V, MCCB	2 - 5.5	+	G 2.0	PVC, 20	1R,1B,G
15	ACU POWER OUTLET (3.0 HP)	1	2300	230			17.00		40AT, 2P, 230V, MCCB	2 - 5.5	+	G 2.0	PVC, 20	1B,1Y,G
16	ACU POWER OUTLET (3.0 HP)	1	2300	230			17.00		40AT, 2P, 230V, MCCB	2 - 5.5	+	G 2.0	PVC, 20	1B,1Y,G
17	ACU POWER OUTLET (1.5 HP)	1	1500	230				10.00	30AT, 2P, 230V, MCCB	2 - 3.5	+	G 2.0	PVC, 20	1Y,1R,G
18	ACU POWER OUTLET (1.5 HP)	1	1500	230				10.00	30AT, 2P, 230V, MCCB	2 - 3.5	+	G 2.0	PVC, 20	1Y,1R,G
19	ACU POWER OUTLET (1.0 HP)	1	800	230				8.00	30AT, 2P, 230V, MCCB	2 - 3.5	+	G 2.0	PVC, 20	1Y,1R,G
	SPARE													
	TOTAL		38000	230	0	94	90	96	225 AT, 3P, 230V, MCCB	3 - 100.0	+	G 30.0	PVC, 63	1R,1B,1Y,G

MAIN FEEDER and CURRENT PROTECTION COMPUTATION:

I_{FL} = [(96 x 1.732)) + (125% x Im)] x DF = 187.52 *Amperes*

I_{CB} = [(96 x 1.732)) + (250% x Im)] x DF = 208.77 *Amperes*

NOTE:

G - Means Ground Wire
1R- Color RED
1B- Color BLACK
1Y- Color YELLOW
1G- Color GREEN

use: 3 - 100.0 SQMM THHN+ 1 - 30.0 SQMM THHN IN 63 MM DIA. PVC
use: 225 AT, 300AF, 3P, 230V,MCCB

This Electrical Design is good only for the above connected loads.
Any additional electrical load connection in the future is not allowed,
Except redesign of electrical load system will be done.

PANEL : PP4 (POWER PANEL 4)
PHASE: 3
VOLTS: 230

CABLE: 3 - 100.0 SQMM THHN+ 1 - 30.0 SQMM THHN
CONDUIT: PVC, 63 MM DIA.
LOCATION: STORAGE ROOM, FOURTH FLOOR

MAIN: 225 AT, 300 AF, 3P, 230V,MCCB
ENCLOSURE : NEMA 1
MOUNTING: SURFACE

CKT NO.	CIRCUIT DESCRIPTION	NO OF OUTLET	LOAD IN RATING						CIRCUIT PROTECTION	Size of Conductor			Size Of Conduit In MM ø	Color Code
			WATTAGE	VOLTAGE	AMPERES				CIRCUIT BREAKER RATING	SQ. MM THHN		SQ. MM THHN(G)		
					3 ø	AB	CA	BC						
1	ACU POWER OUTLET (6.0 HP)	1	4700	230	18				50AT, 3P, 230V, MCCB	3 - 8.0	+	G 5.5	PVC, 25	1R,1B,1Y,G
2	ACU POWER OUTLET (6.0 HP)	1	4700	230	18				50AT, 3P, 230V, MCCB	3 - 8.0	+	G 5.5	PVC, 25	1R,1B,1Y,G
3	ACU POWER OUTLET (6.0 HP)	1	4700	230	18				50AT, 3P, 230V, MCCB	3 - 8.0	+	G 5.5	PVC, 25	1R,1B,1Y,G
4	ACU POWER OUTLET (6.0 HP)	1	4700	230	18				50AT, 3P, 230V, MCCB	3 - 8.0	+	G 5.5	PVC, 25	1R,1B,1Y,G
5	ACU POWER OUTLET (6.0 HP)	1	4700	230	18				50AT, 3P, 230V, MCCB	3 - 8.0	+	G 5.5	PVC, 25	1R,1B,1Y,G
6	ACU POWER OUTLET (6.0 HP)	1	4700	230	18				50AT, 3P, 230V, MCCB	3 - 8.0	+	G 5.5	PVC, 25	1R,1B,1Y,G
7	ACU POWER OUTLET (6.0 HP)	1	4700	230	18				50AT, 3P, 230V, MCCB	3 - 8.0	+	G 5.5	PVC, 25	1R,1B,1Y,G
	SPARE													
8	ACU POWER OUTLET (1.5 HP)	1	1500	230			10.00		30AT, 2P, 230V, MCCB	2 - 3.5	+	G 2.0	PVC, 20	1B,1Y,G
	SPARE													
	TOTAL		34400	230	126	0	10	0	225 AT, 3P, 230V, MCCB	3 - 100.0	+	G 30.0	PVC, 63	1R,1B,1Y,G

MAIN FEEDER and CURRENT PROTECTION COMPUTATION:

I_{FL} = [(126) + (10 x 1.732)) + (125% x Im)] x DF = 165.82 *Amperes*

I_{CB} = [(126) + (10 x 1.732)) + (250% x Im)] x DF = 188.32 *Amperes*

NOTE:

G - Means Ground Wire
1R- Color RED
1B- Color BLACK
1Y- Color YELLOW
1G- Color GREEN

use: 3 - 100.0 SQMM THHN+ 1 - 30.0 SQMM THHN IN 63 MM DIA. PVC
use: 225 AT, 300AF, 3P, 230V,MCCB

This Electrical Design is good only for the above connected loads.
Any additional electrical load connection in the future is not allowed,
Except redesign of electrical load system will be done.

PREPARED BY:	END USER:	REVIEWED BY:		ENDORSED BY:	REC. APPROVAL:		APPROVED BY:	PROJECT TITLE/ LOCATION:	IMPLEMENTING AGENCY:	SHT NO:
R.J.R. SANCHEZ PDU OVPPD	C.J. BAESA CAMPUS ADMINISTRATOR CAVITE CITY	R. PEÑA PROF. ELEC. ENGINEER	S. B. BAYOT JR. HEAD PDU	O. B. DELOS REYES DIRECTOR PLANNING AND DEVT. OFFICE	A. G. MAGCAWAS VPPD CVSU	J. X. B. NEPOMUCENO VPASS CVSU	J. X. B. NEPOMUCENO OIC CVSU	REHABILITATION OF ACADEMIC BUILDING AT CVSU CAVITE CITY (ADDITIONAL ELECTRICAL PLAN) CAVITE STATE UNIVERSITY CAVITE CITY	CAVITE STATE UNIVERSITY	E - 18

PANEL : MDP (MAIN DISTRIBUTION PANEL)
PHASE: 3
VOLTS: 230

CABLE: 3 - 2 - 200.0 SQMM THHN+ 3 - 80.0 SQMM THHN
CONDUIT: RSC, 3-90 MM DIA.
LOCATION: ELECTRICAL ROOM, GROUND FLOOR

MAIN: 700 AT, 800AF, 3P, 230V,MCCB
ENCLOSURE : NEMA 1
MOUNTING: SURFACE

CKT NO.	CIRCUIT DESCRIPTION	PANEL	LOAD IN RATING						CIRCUIT PROTECTION	Size of Conductor		Size Of Conduit in MM ø	Color Code
			Volt- Amp	VOLT	AMPERES								
					3 ø	AB	CA	BC	CIRCUIT BREAKER RATING	SQ. MM THHN	SQ. MM THHN (G)		
1	LIGHTING AND POWER PANEL 1	LP1	17540	230	0	21	28	27	70 AT, 3P, 230V, MCCB	3 - 14.0	+ G 8.0	PVC, 25	1R,1B,1Y,G
2	LIGHTING AND POWER PANEL 2	LP2	25560	230	0	36	39	37	70 AT, 3P, 230V, MCCB	3 - 14.0	+ G 8.0	PVC, 25	1R,1B,1Y,G
3	LIGHTING AND POWER PANEL 3	LP3	39200	230	0	61	58	52	125 AT, 3P, 230V, MCCB	3 - 38.0	+ G 14.0	PVC, 40	1R,1B,1Y,G
4	LIGHTING AND POWER PANEL 4	LP4	9680	230	0	15	13	15	50 AT, 3P, 230V, MCCB	3 - 14.0	+ G 8.0	PVC, 25	1R,1B,1Y,G
5	POWER PANEL 1	PP1	33600	230	0	71	80	85	200 AT, 3P, 230V, MCCB	3 - 80.0	+ G 22.0	PVC, 50	1R,1B,1Y,G
6	POWER PANEL 2	PP2	24100	230	0	61	52	56	200 AT, 3P, 230V, MCCB	3 - 80.0	+ G 22.0	PVC, 50	1R,1B,1Y,G
7	POWER PANEL 3	PP3	38000	230	0	94	90	96	225 AT, 3P, 230V, MCCB	3 - 100.0	+ G 30.0	PVC, 63	1R,1B,1Y,G
8	POWER PANEL 4	PP4	34400	230	126	0	10	0	225 AT, 3P, 230V, MCCB	3 - 100.0	+ G 30.0	PVC, 63	1R,1B,1Y,G
7	ELEVATOR PANEL	ELP	7460	230	28				50 AT, 3P, 230V, MCCB	3 - 14.0	+ G 8.0	PVC, 25	1R,1B,1Y,G
	SPARE												
8	FIRE DETECTION ALARM SYSTEM	FDAS	500	230	0	2			15 AT, 2P, 230V, MCCB	2 - 2.0		PVC, 20	1R,1B
9	WATER PUMP PANEL 3.0 HP	WPP	2300	230	0	17.00			40 AT, 2P, 230V, MCCB	2 - 8.0	+ G 5.5	PVC, 25	1R,1B,G
10	BOOSTER PUMP PANEL 1.0 HP	BPP	2300	230	0		8.00		40 AT, 2P, 230V, MCCB	2 - 8.0	+ G 5.5	PVC, 25	1B, 1Y,G
	SPARE												
	TOTAL		234640	230	154	377	377	368	700AT, 3P, 230V, MCCB	3 -2- 200.0	+ G 3-80.0	RSC, 3-90	1R,1B,1Y, G

MAIN FEEDER and CURRENT PROTECTION COMPUTATION:

I_{FL} = [(154 + (377 x 1.732))] x DF = 645.57 Amperes

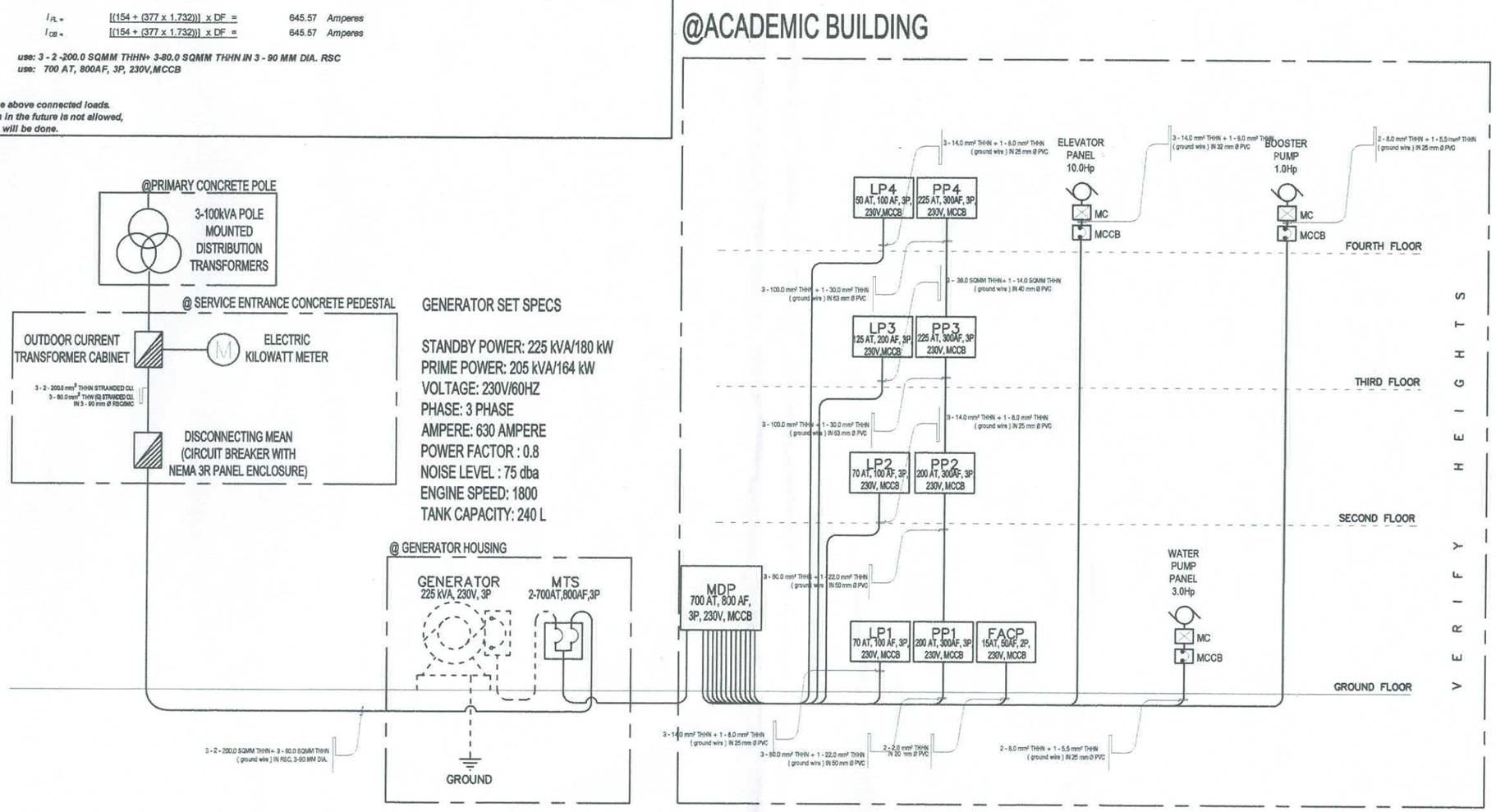
I_{CB} = [(154 + (377 x 1.732))] x DF = 645.57 Amperes

NOTE:

G - Means Ground Wire
1R- Color RED
1B- Color BLACK
1Y- Color YELLOW
1G- Color GREEN

use: 3 - 2 -200.0 SQMM THHN+ 3-80.0 SQMM THHN IN 3 - 90 MM DIA. RSC
use: 700 AT, 800AF, 3P, 230V,MCCB

This Electrical Design is good only for the above connected loads.
Any additional electrical load connection in the future is not allowed,
Except redesign of electrical load system will be done.



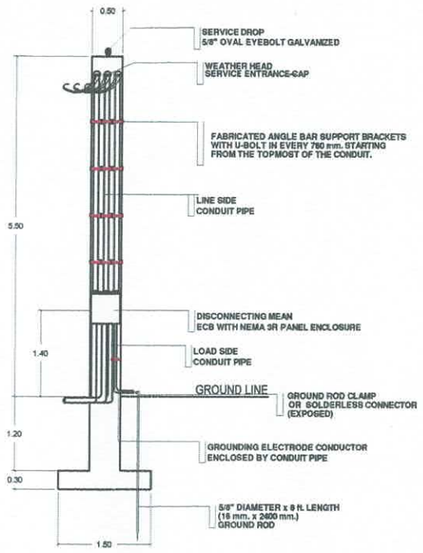
1
E19 SCALE

SINGLE LINE DIAGRAM

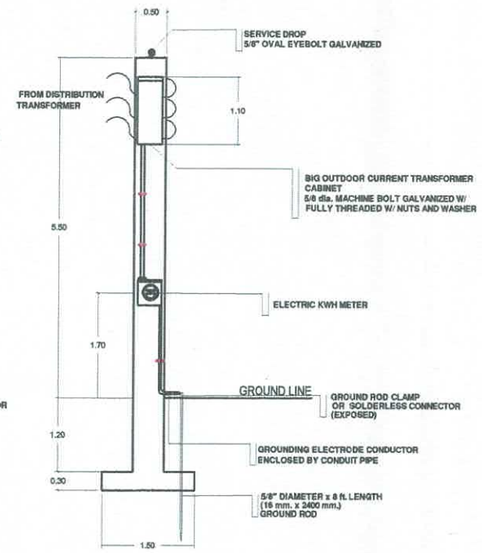
NTS

PREPARED BY:	END USER:	REVIEWED BY:		ENDORSED BY:	REC. APPROVAL:		APPROVED BY:	PROJECT TITLE/ LOCATION:	IMPLEMENTING AGENCY:	SHT NO:
R.J.R. SANCHEZ PDU OVPPD	C.J. BAESA CAMPUS ADMINISTRATOR CAVITE CITY	R. P. PENA PROF. ELEC. ENGINEER	S. B. BAYOT JR. HEAD PDU	O. B. DELOS REYES DIRECTOR PLANNING AND DEVT. OFFICE	A. G. MAGCAWAS VPPD CVSU	J. X. B. NEPOMUCENO VPASS CVSU	J. X. B. NEPOMUCENO OIC CVSU	REHABILITATION OF ACADEMIC BUILDING AT CVSU CAVITE CITY (ADDITIONAL ELECTRICAL PLAN) CAVITE STATE UNIVERSITY CAVITE CITY	CAVITE STATE UNIVERSITY	E - 19

FRONT VIEW



REAR VIEW

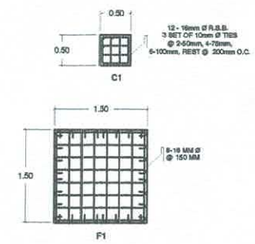


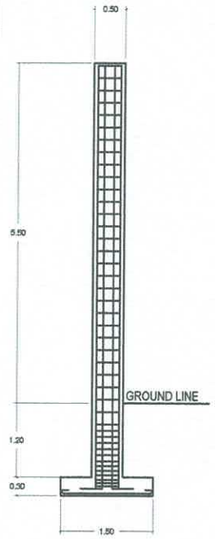
SCHEDULE OF FOOTINGS

NAME	TYPE	THICKNESS	SIZE (LxW)	DEPTH	REINFORCEMENT	
					BOTTOM	
					ALONG L	ALONG W
F1	ISOLATED	300 MM	1500 x 1500 MM	1500 MM	8-16 MM Ø @ 150 MM	8-16 MM Ø @ 150 MM

COLUMN	DIMENSION	REINFORCEMENT	NO. OF TIES & SPACING
C1	500 MM X 500 MM	12 - 16mm Ø R.S.B.	3 SET OF 10mm Ø TIES @ 2-50mm, 4-70mm, 6-100mm, REST @ 200mm O.C.

COLUMN DETAILS

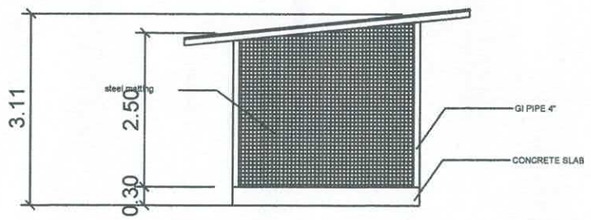


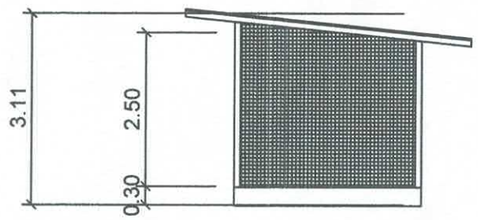


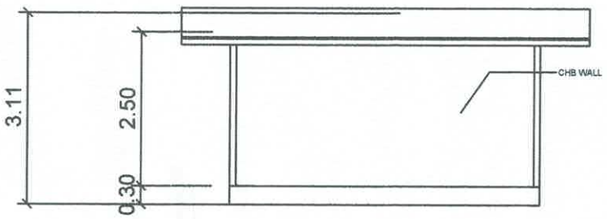
1 / E20 CONCRETE PEDESTAL DETAILS

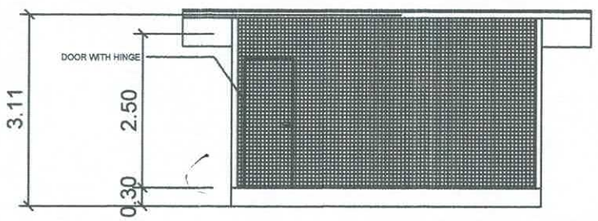
SCALE 1:100 MTS

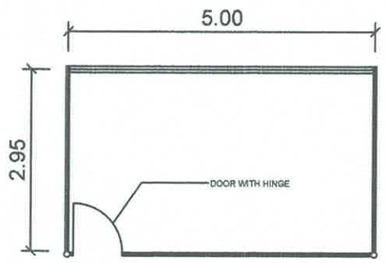
GENERATOR SET HOUSING











2 / E20 GENERATOR HOUSING DETAILS

SCALE 1:100 MTS

PREPARED BY:	END USER:	REVIEWED BY:		ENDORSED BY:	REC. APPROVAL:		APPROVED BY:	PROJECT TITLE/ LOCATION:	IMPLEMENTING AGENCY:	SHT NO:
R.J.R. SANCHEZ PDU OVPPD	C.J. BAESA CAMPUS ADMINISTRATOR CAVITE CITY	R. T. PEÑA PROF. ELEC. ENGINEER	S. B. BAYOT JR. HEAD PDU	O. B. DELOS REYES DIRECTOR PLANNING AND DEVT. OFFICE	A. G. MAGCAWAS VPPD CVSU	J. X. B. NEPOMUCENO VPASS CVSU	J. X. B. NEPOMUCENO OIC CVSU	REHABILITATION OF ACADEMIC BUILDING AT CVSU CAVITE CITY (ADDITIONAL ELECTRICAL PLAN) CAVITE STATE UNIVERSITY CAVITE CITY	CAVITE STATE UNIVERSITY	E - 20