

LOWER FLOOR PLAN
SCALE 1 : 250 MTS.

CADD BY:
E. N. Roderos Jr.
E. N. RODEROS JR.
PPU

END USER:
J. P. Oubillo
J. P. OUBILLO
DEAN
CSPEAR

ENDORSED BY:
O. B. DeLos Reyes
O. B. DELOS REYES
DIRECTOR
PLANNING OFFICE

REC. APPROVAL:
M. M. Escobar
M. M. ESCOBAR
VPPPD
CVSU

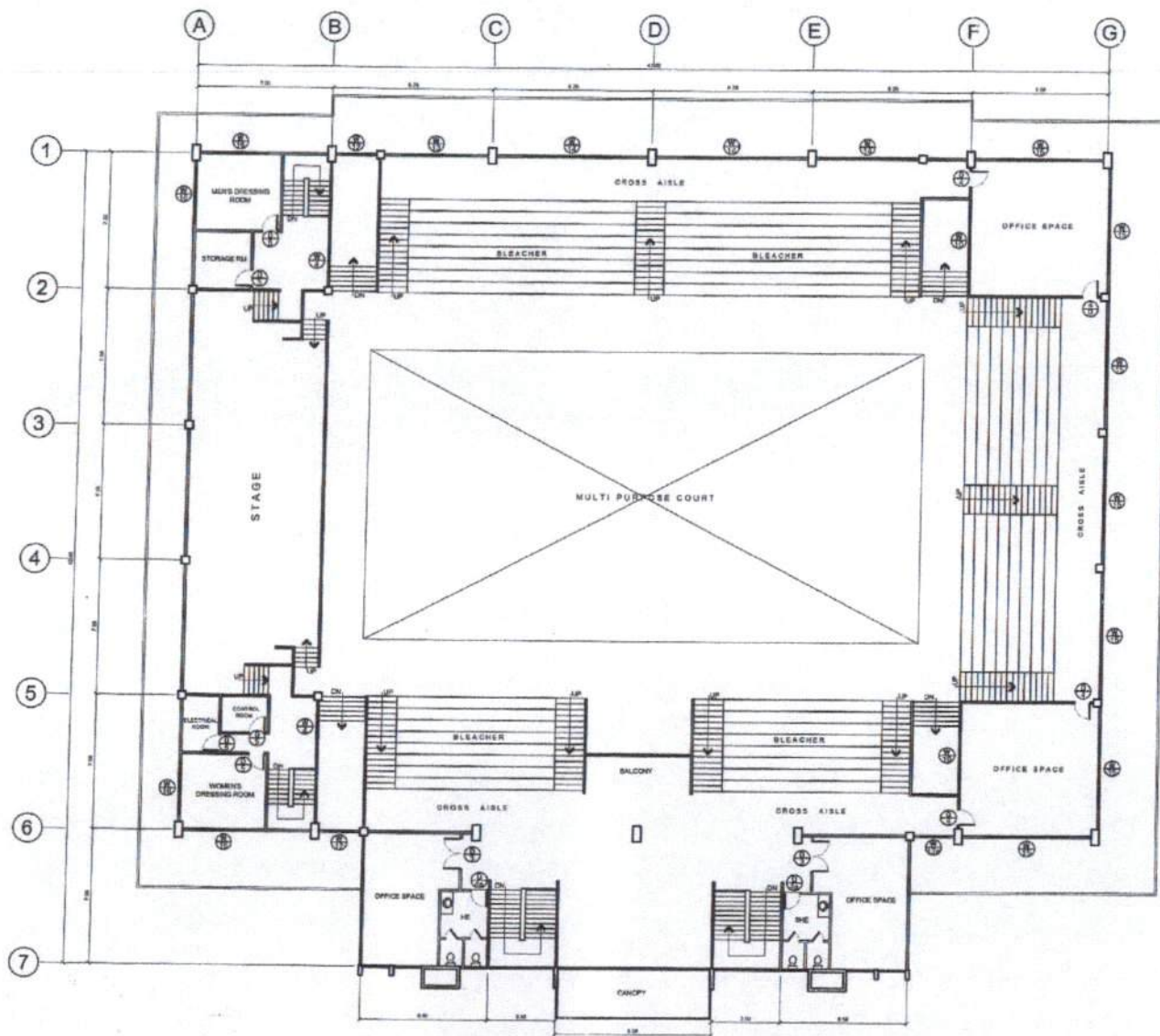
REC. APPROVAL:
C. V. Polinga
C. V. POLINGA
VRASS
CVSU

APPROVED BY:
H. D. Robles
H. D. ROBLES
PRES
CVSU

PROJECT TITLE/ LOCATION:
**PROPOSED ELECTRICAL REWIRING
HUMAN KINETICS BLDG. (GYMNASIUM)
CVSU, MAIN CAMPUS**

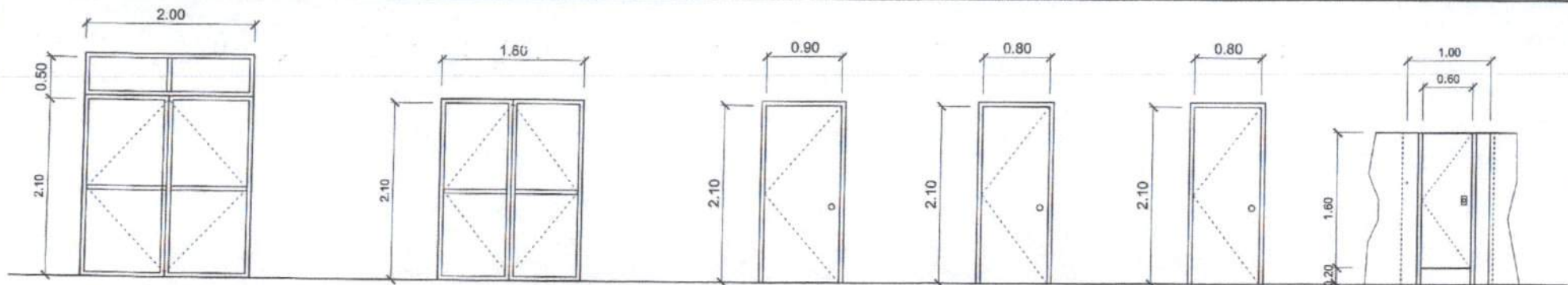
IMPLEMENTING AGENCY
CAVITE STATE UNIVERSITY

SHT NO:
A - 1



○
UPPER FLOOR PLAN
 SCALE 1 : 250 MTS.

CADD BY: E. N. RODEROS JR. <small>PPU OYPPD</small>	END USER: J. P. CUBILLO <small>DEAN CSPEAR</small>	ENDORSED BY: O. B. DE LOS REYES <small>DIRECTOR PLANNING OFFICE</small>	REC. APPROVAL: M. M. ESCOBAR <small>VPPPD CVSU</small>	REC. APPROVAL: C. A. POLJUNGA <small>VPASS CVSU</small>	APPROVED BY: H. D. ROBLES <small>PRES CVSU</small>	PROJECT TITLE/LOCATION: PROPOSED ELECTRICAL REWIRING - HUMAN KINETICS BLDG. (GYMNASIUM) <small>CVSU, MAIN CAMPUS</small>	IMPLEMENTING AGENCY CAVITE STATE UNIVERSITY	SHEET NO: A - 2
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ALUMINUM FRAME DOOR COMPLETE W / ALL ACCESSORIES W / 3/8" THK. REFLECTIVE TEMPERED GLASS ON COLORED POWDER COATED FINISH ALUMINUM FRAMING 6 SETS

D/2

ALUMINUM FRAME DOOR COMPLETE W / ALL ACCESSORIES W / 3/8" THK. REFLECTIVE TEMPERED GLASS ON COLORED POWDER COATED FINISH ALUMINUM FRAMING 9 SETS

D/3

0.90 X 2.10 STEEL DOOR W/ COMPLETE ACCESSORIES 16 SETS

D/4

0.80 X 2.10 STEEL DOOR W/ COMPLETE ACCESSORIES 8 SETS

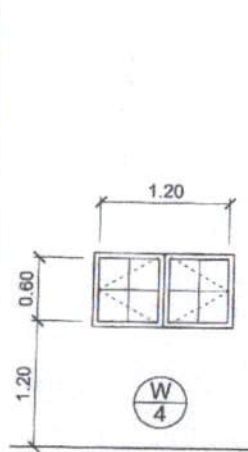
D/4a

0.80 X 2.10 STEEL DOOR W/ COMPLETE ACCESSORIES 6 SETS

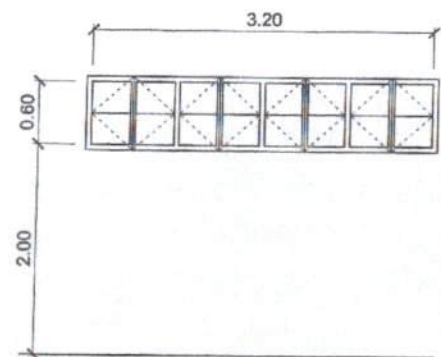
D/5

0.60 X 1.60 ALUMINUM DOOR W/ COMPLETE ACCESSORIES 17 SETS

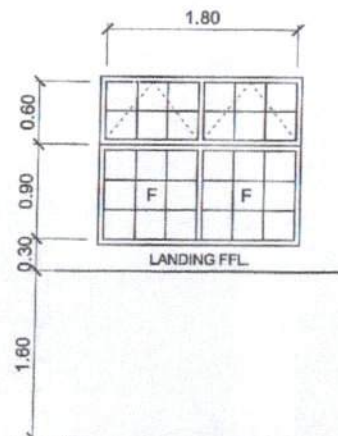
D/5



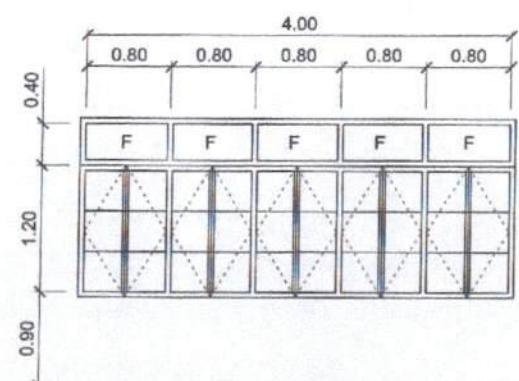
W/4



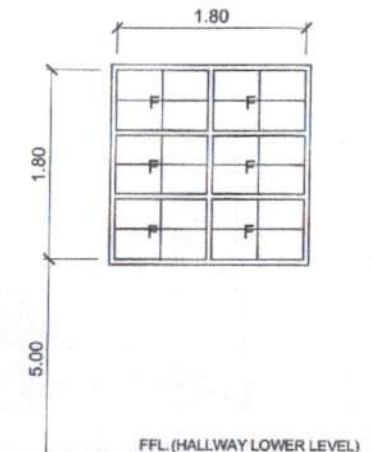
W/5



W/6



W/10



W/12

ALUMINUM CASEMENT WINDOW COMPLETE W / ALL ACCESSORIES W / 1/4" THK COLORED GLASS 2 SETS

ALUMINUM CASEMENT WINDOW COMPLETE W / ALL ACCESSORIES W / 1/4" THK COLORED GLASS 5 SETS

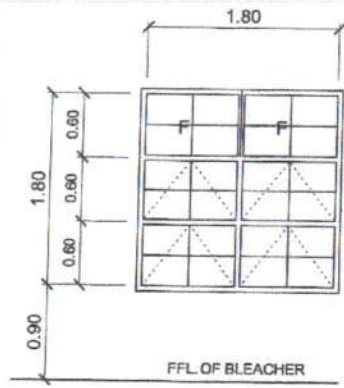
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ALUMINUM CASEMENT WINDOW COMPLETE W / ALL ACCESSORIES W / 1/4" THK COLORED GLASS 9 SETS

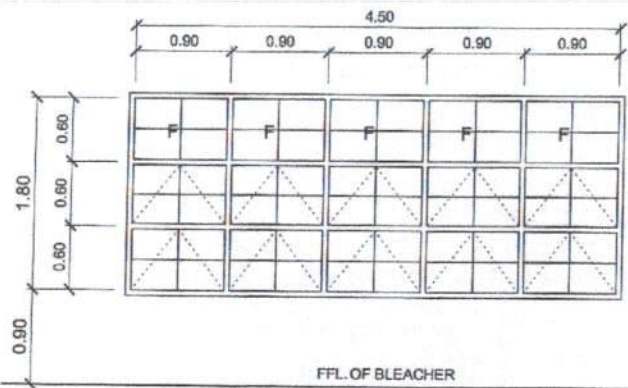
ALUMINUM FIXED WINDOW COMPLETE W / ALL ACCESSORIES W / 1/4" THK COLORED GLASS 2 SETS

CADD BY:
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PPU

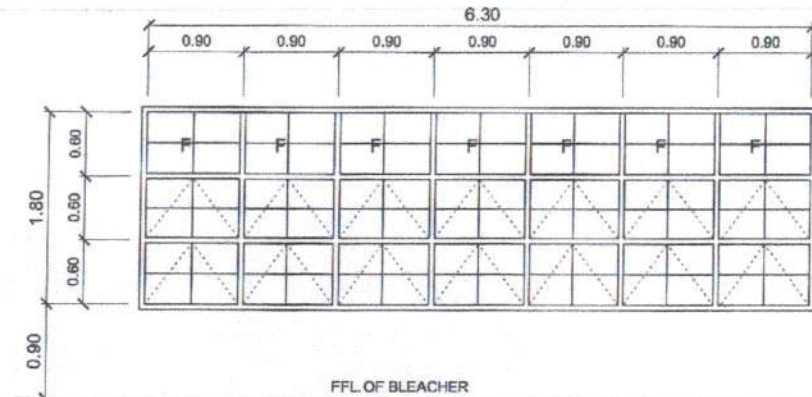
END USER: J. P. CUBILLO DEAN CSPEAR	ENDORSED BY: <i>O. B. DeLos Reyes</i> O. B. DELOS REYES DIRECTOR PLANNING OFFICE	REC. APPROVAL: <i>M. M. Escobar</i> M. M. ESCOBAR VPPPD CVSU	REC. APPROVAL: <i>C. A. Polinga</i> C. A. POLINGA VRAS CVSU	APPROVED BY: <i>H. D. Robles</i> H. D. ROBLES PRES CVSU	PROJECT TITLE/LOCATION: PROPOSED ELECTRICAL REWIRING HUMAN KINETICS BLDG. (GYMNASIUM) CVSU, MAIN CAMPUS	IMPLEMENTING AGENCY: CAVITE STATE UNIVERSITY	SHT NO.: A - 3
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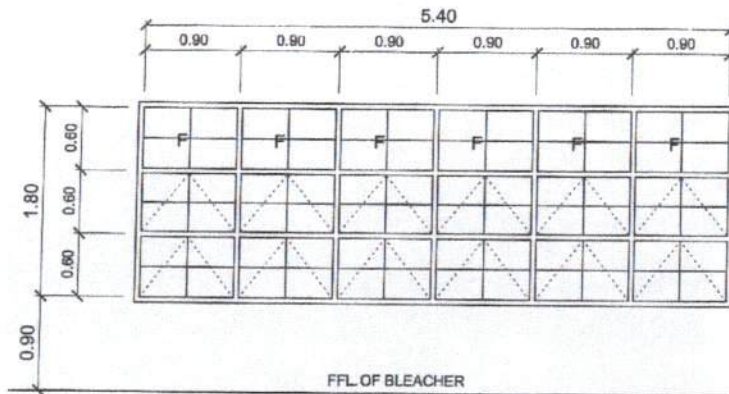
W
12a ALUMINUM AWNING WINDOW
COMPLETE W / ALL ACCESSORIES
W / 1/4" THK COLORED GLASS
1 SET



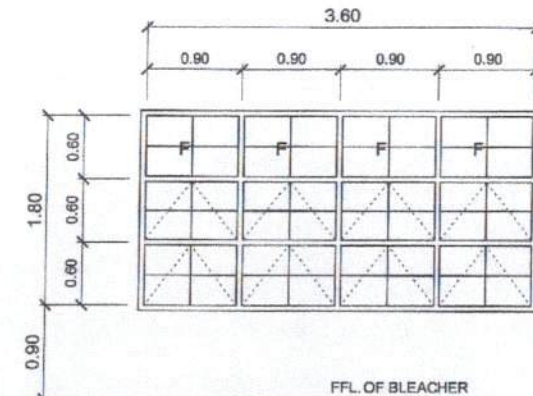
W
13 ALUMINUM AWNING WINDOW
COMPLETE W / ALL ACCESSORIES
W / 1/4" THK COLORED GLASS
1 SET



W
14 ALUMINUM AWNING WINDOW
COMPLETE W / ALL ACCESSORIES
W / 1/4" THK COLORED GLASS
3 SETS



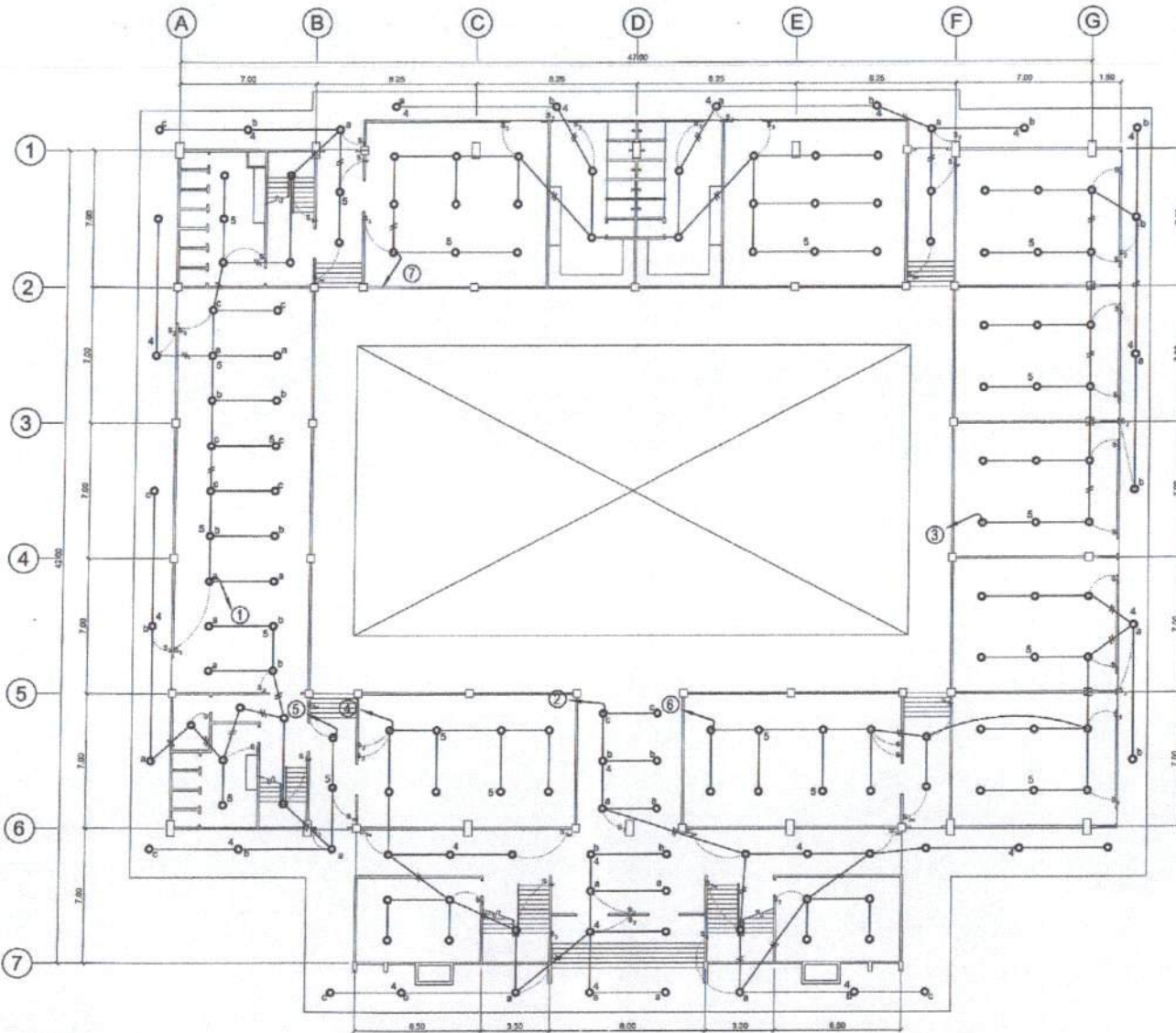
W
15 ALUMINUM AWNING WINDOW
COMPLETE W / ALL ACCESSORIES
W / 1/4" THK COLORED GLASS
7 SETS



W
16 ALUMINUM AWNING WINDOW
COMPLETE W / ALL ACCESSORIES
W / 1/4" THK COLORED GLASS
4 SETS

CADD BY:
E. N. Roderos Jr.
E. N. RODEROS JR.
PPU
CVPPD

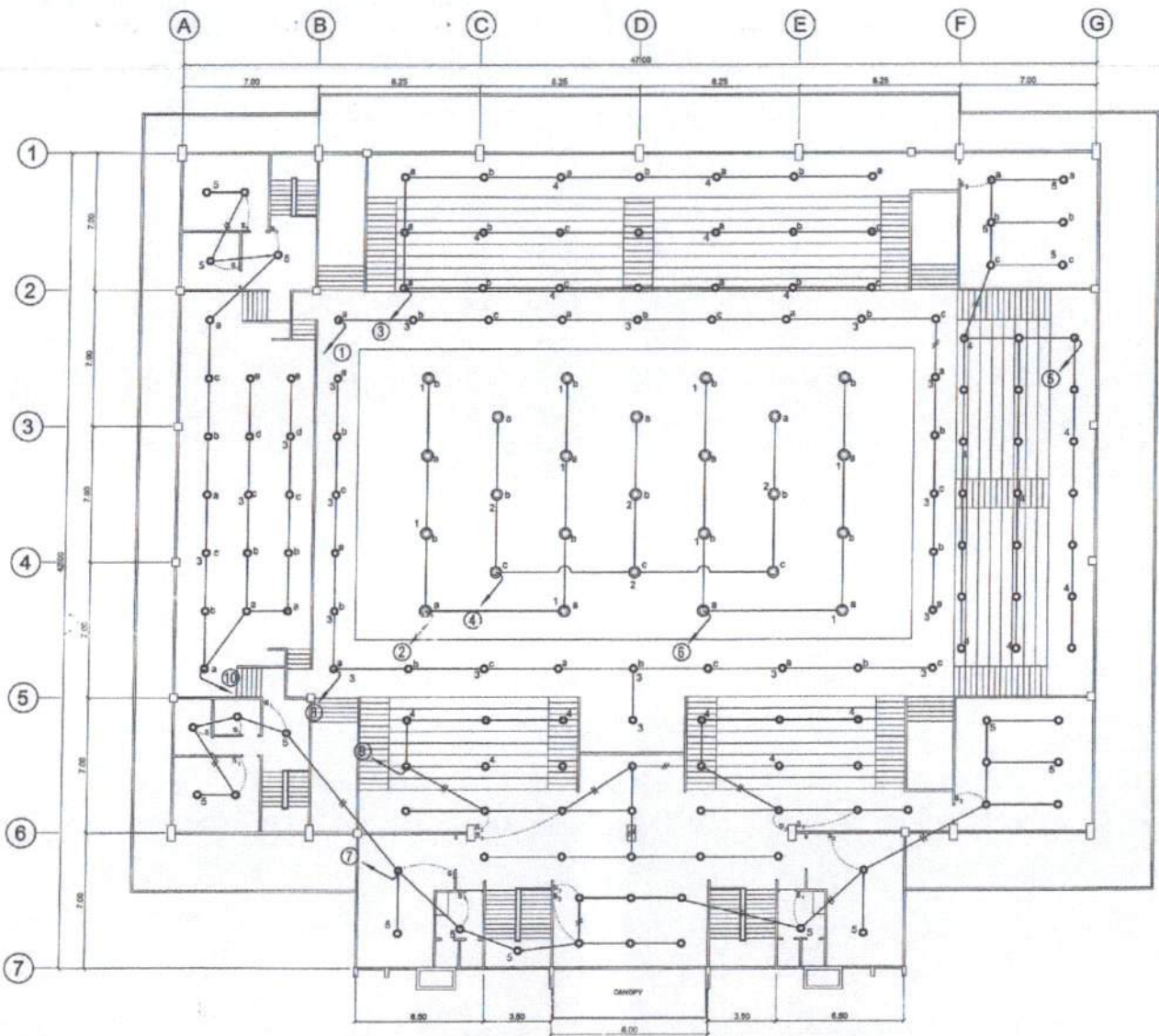
END USER: <i>J. P. Cubillo</i> J. P. CUBILLO DEAN CSPEAR	ENDORSED BY: <i>O. B. DeLosReyes</i> O. B. DELOS REYES DIRECTOR PLANNING OFFICE	REC. APPROVAL: <i>M. M. Escobar</i> M. M. ESCOBAR VP/PPD CVSU	REC. APPROVAL: <i>C. A. Polinga</i> C. A. POLINGA VP/ASS CVSU	APPROVED BY: <i>H. D. Robles</i> H. D. ROBLES PRES CVSU	PROJECT TITLE / LOCATION: PROPOSED ELECTRICAL REWIRING HUMAN KINETICS BLDG. (GYMNASIUM) CVSU, MAIN CAMPUS	IMPLEMENTING AGENCY: CAVITE STATE UNIVERSITY	SHT NO.: A - 4
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LOWER FLOOR LIGHTING LAYOUT

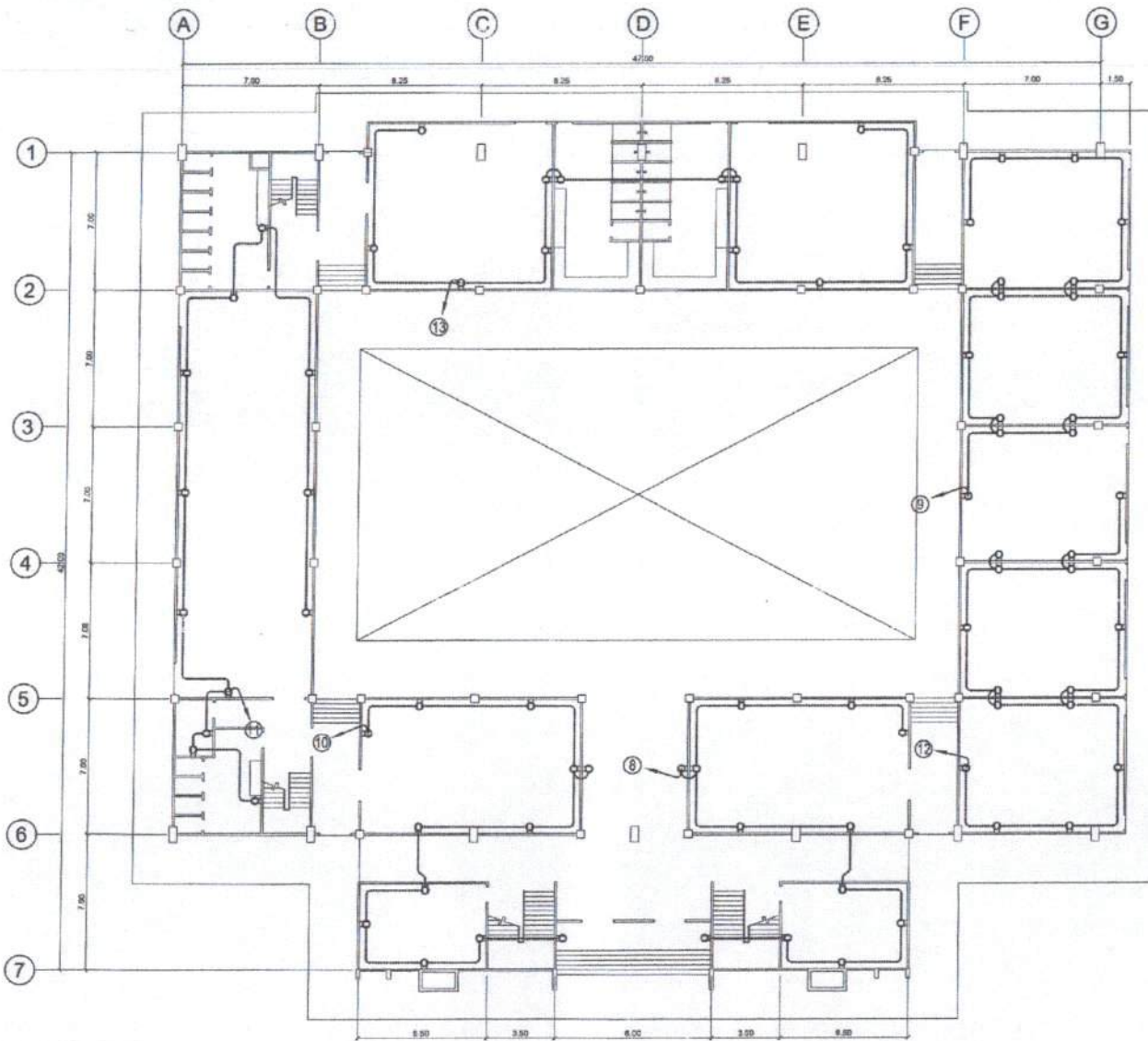
SCALE 1 : 250 MTS.

CADD BY: <i>E. N. Roderos</i> E. N. RODEROS JR. <small>PPU OVPPD</small>		END USER: <i>J. P. Cubillo</i> J. P. CUBILLO <small>DEAN CSPEAR</small>	
ELECTL. ENGR. <i>E. N. Roderos</i> EFREN ROCILLO <small>PPU OVPPD</small>		ENDORSED BY: <i>O. B. De los Reyes</i> O. B. DELOS REYES <small>DIRECTOR PLANNING OFFICE</small>	
REC. APPROVAL: <i>M. M. Escobar</i> M. M. ESCOBAR <small>VPPPD CVSU</small>		REC. APPROVAL: <i>C. A. Rodlinga</i> C. A. RODLINGA <small>VPASS CVSU</small>	
APPROVED BY: <i>H. D. Robles</i> H. D. ROBLES <small>PPRES CVSU</small>		PROJECT TITLE/LOCATION: PROPOSED ELECTRICAL REWIRING HUMAN KINETICS BLDG. (GYMNASIUM) CVSU, MAIN CAMPUS	
IMPLEMENTING AGENCY: CAVITE STATE UNIVERSITY		SHT NO.: E - 1	



UPPER FLOOR LIGHTING LAYOUT
SCALE 1 : 250 MTS.

CADD BY: <i>E. N. Roderos Jr.</i> E. N. RODEROS JR. RPU		END USER: <i>J. P. Cubillo</i> J. P. CUBILLO DEAN CSPEAR		REC. APPROVAL: <i>M. M. Escobar</i> M. M. ESCOBAR VPPPD CVSU		REC. APPROVAL: <i>C. A. Polinga</i> C. A. POLINGA VPASS CVSU		APPROVED BY: <i>H. D. Robles</i> H. D. ROBLES PRES CVSU		PROJECT TITLE / LOCATION: PROPOSED ELECTRICAL REWIRING HUMAN KINETICS BLDG. (GYMNASIUM) CVSU, MAIN CAMPUS		IMPLEMENTING AGENCY CAVITE STATE UNIVERSITY		SHT NO. E - 2	
ELECTL. ENGR. <i>E. N. Roderos Jr.</i> E. N. RODEROS JR. RPU		ENDORSED BY: <i>O. B. DeLos Reyes</i> O. B. DELOS REYES DIRECTOR PLANNING OFFICE		REC. APPROVAL: <i>M. M. Escobar</i> M. M. ESCOBAR VPPPD CVSU		REC. APPROVAL: <i>C. A. Polinga</i> C. A. POLINGA VPASS CVSU		APPROVED BY: <i>H. D. Robles</i> H. D. ROBLES PRES CVSU		PROJECT TITLE / LOCATION: PROPOSED ELECTRICAL REWIRING HUMAN KINETICS BLDG. (GYMNASIUM) CVSU, MAIN CAMPUS		IMPLEMENTING AGENCY CAVITE STATE UNIVERSITY		SHT NO. E - 2	

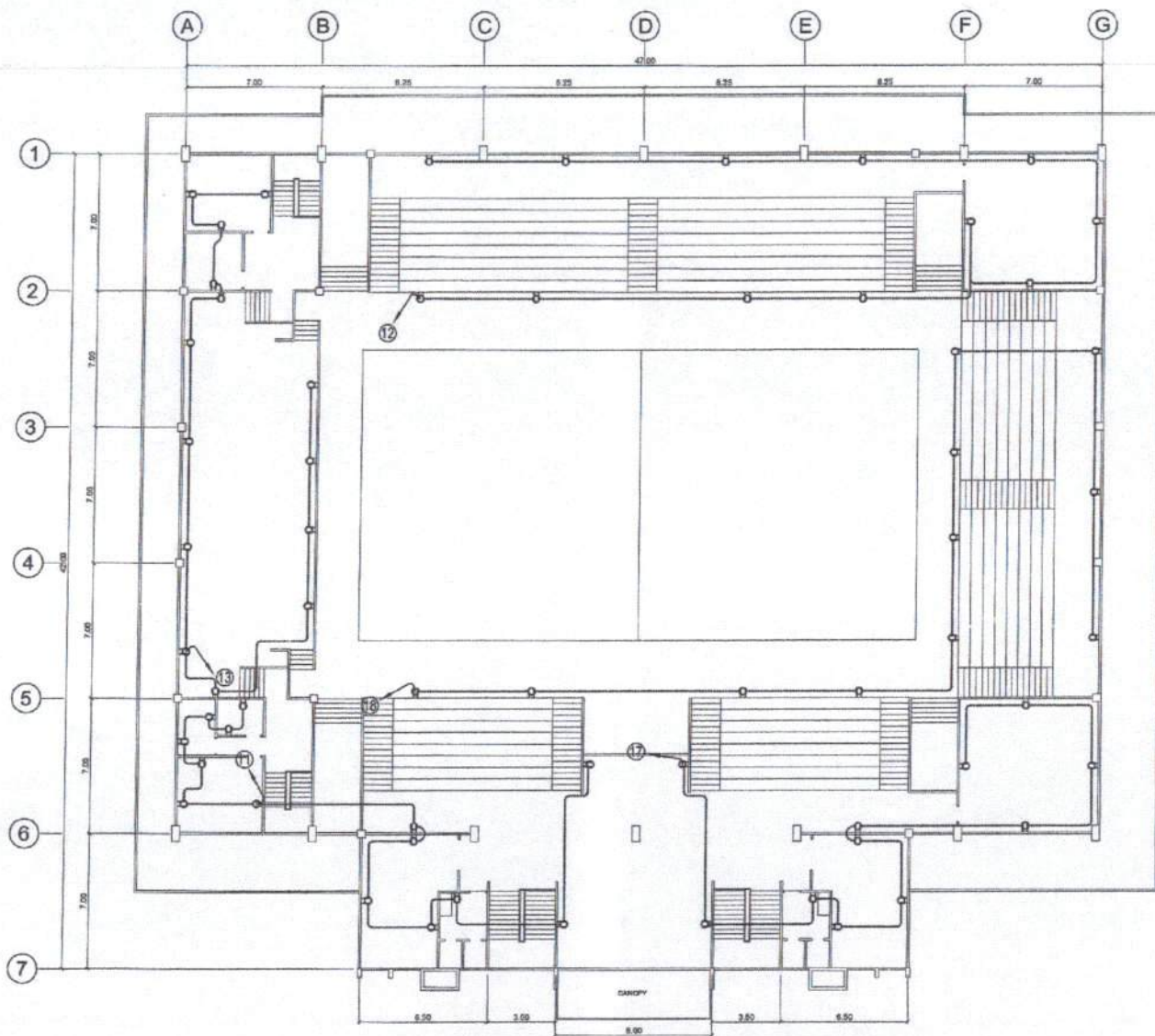


LOWER FLOOR POWER LAYOUT

SCALE

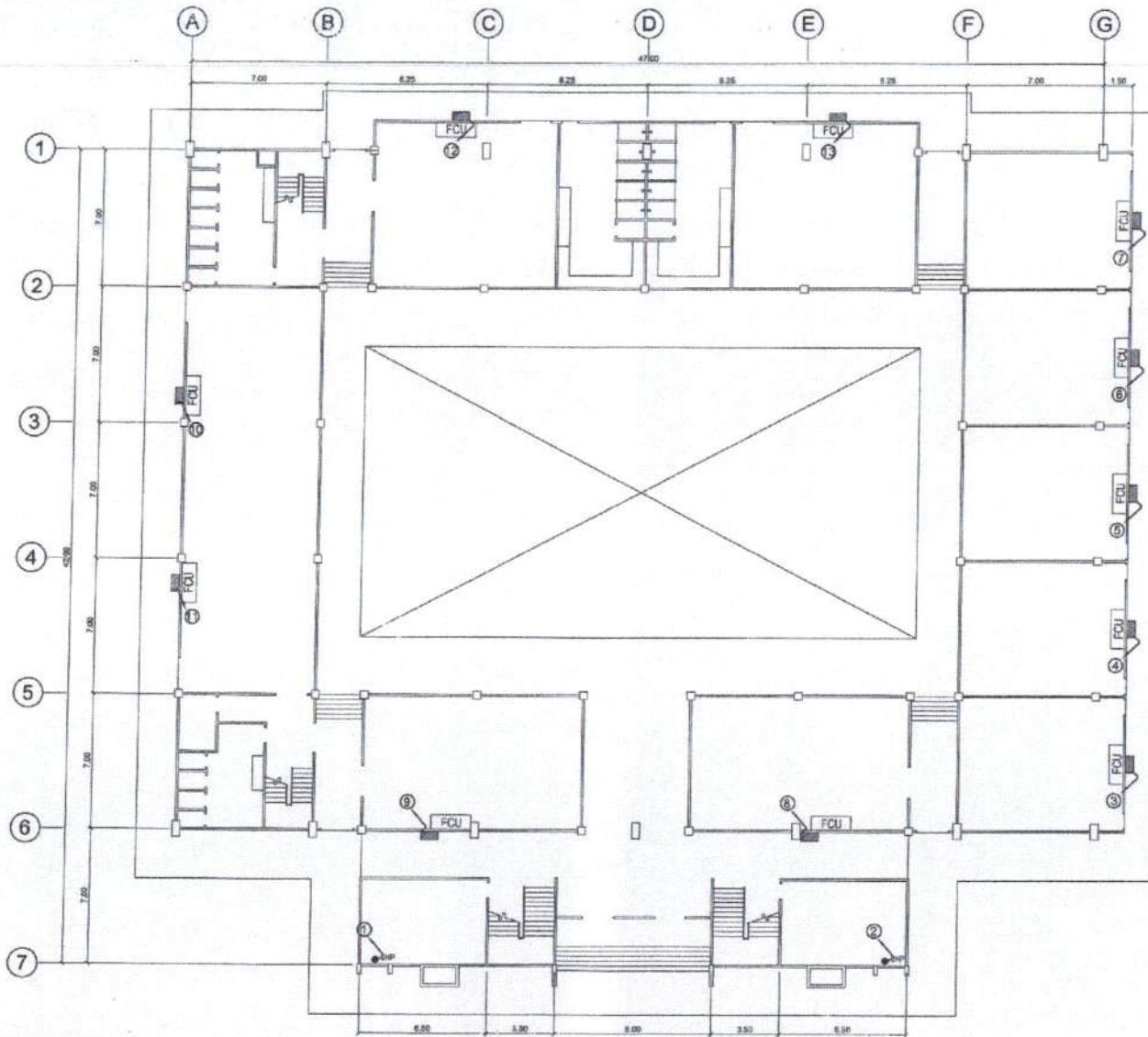
1 : 250 MTS.

CADD BY: <i>[Signature]</i> E. N. RODEROS JR. <small>PPU</small> <small>CVPPD</small>		END USER: <i>[Signature]</i> J. P. CUBILLO <small>DEAN</small> <small>CSPEAR</small>	
ELECTL. ENGR. <i>[Signature]</i> EEREN ROCILLO <small>PPU</small> <small>CVPPD</small>		ENDORSED BY: <i>[Signature]</i> O. B. DELOS REYES <small>DIRECTOR</small> <small>PLANNING OFFICE</small>	
REC. APPROVAL: <i>[Signature]</i> M. M. ESCOBAR <small>VPPPD</small> <small>CVSU</small>		REC. APPROVAL: <i>[Signature]</i> C. A. POLINGA <small>VPASS</small> <small>CVSU</small>	
APPROVED BY: <i>[Signature]</i> H. D. ROBLES <small>PRES</small> <small>CVSU</small>		PROJECT TITLE/LOCATION: PROPOSED ELECTRICAL REWIRING HUMAN KINETICS BLDG. (GYMNASIUM) <small>CVSU, MAIN CAMPUS</small>	
IMPLEMENTING AGENCY CAVITE STATE UNIVERSITY			SHT NO.: E - 3



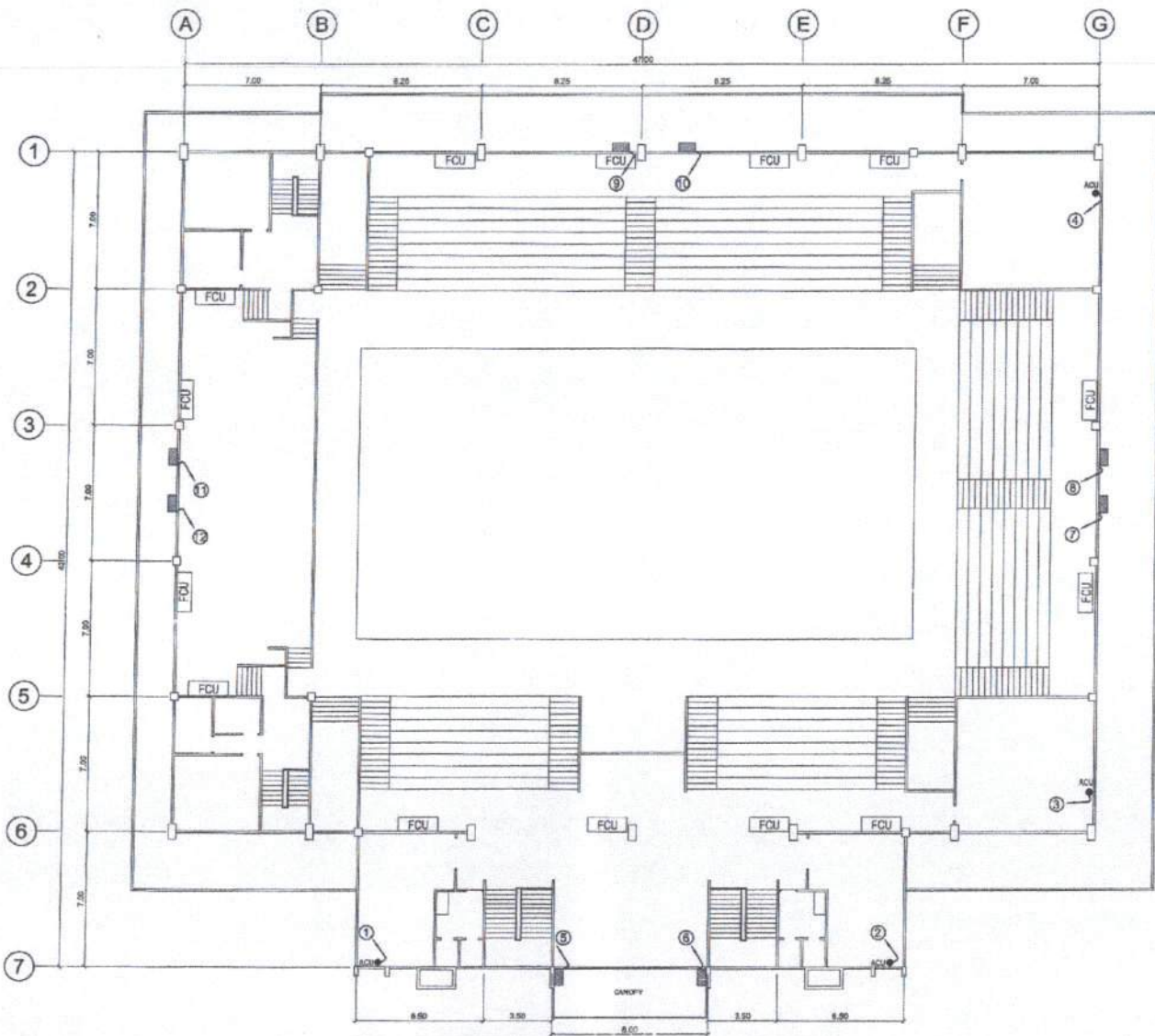
UPPER FLOOR POWER LAYOUT
 SCALE 1 : 250 MTS.

CADD BY: <i>E. N. Roderos Jr.</i> E. N. RODEROS JR. PPU OVP/PPD	END USER: <i>J. P. Cubillo</i> J. P. CUBILLO DEAN CSPEAR	REC. APPROVAL: <i>M. M. Escobar</i> M. M. ESCOBAR VPPPD CVSU	REC. APPROVAL: <i>C. A. Podinga</i> C. A. PODINGA VPASS CVSU	APPROVED BY: <i>H. D. Robles</i> H. D. ROBLES PRES CVSU	PROJECT TITLE/LOCATION: PROPOSED ELECTRICAL REWIRING HUMAN KINETICS BLDG. (GYMNASIUM) CVSU, MAIN CAMPUS	IMPLEMENTING AGENCY: CAVITE STATE UNIVERSITY	SHT NO: E - 4
ELECTL. ENGR. <i>Efren Kocillo</i> EFREN KOCILLO PPU OVP/PPD	ENDORSED BY: <i>O. B. De los Reyes</i> O. B. DELOS REYES DIRECTOR PLANNING OFFICE						



LOWER FLOOR ACU LAYOUT
SCALE 1 : 250 MTS.

CADD BY: <i>E. N. Roderos Jr.</i> E. N. RODEROS JR. PPU	END USER: <i>J. P. Cubillo</i> J. P. CUBILLO DEAN CSPEAR	REC. APPROVAL: <i>M. M. Escobar</i> M. M. ESCOBAR VPPPD CVSU		REC. APPROVAL: <i>C. A. Polinga</i> C. A. POLINGA VPASS CVSU	APPROVED BY: <i>J. H. D. Robles</i> J. H. D. ROBLES PRES CVSU	PROJECT TITLE/LOCATION: PROPOSED ELECTRICAL REWIRING HUMAN KINETICS BLDG. (GYMNASIUM) CVSU, MAIN CAMPUS	IMPLEMENTING AGENCY: CAVITE STATE UNIVERSITY	SHT NO.: E - 5
ELECTL ENGR. <i>Efrén Rocillo</i> EFRÉN ROCILLO PPU	ENDORSED BY: <i>O. B. De los Reyes</i> O. B. DELOS REYES DIRECTOR PLANNING OFFICE	REC. APPROVAL: <i>M. M. Escobar</i> M. M. ESCOBAR VPPPD CVSU		REC. APPROVAL: <i>C. A. Polinga</i> C. A. POLINGA VPASS CVSU	APPROVED BY: <i>J. H. D. Robles</i> J. H. D. ROBLES PRES CVSU	PROJECT TITLE/LOCATION: PROPOSED ELECTRICAL REWIRING HUMAN KINETICS BLDG. (GYMNASIUM) CVSU, MAIN CAMPUS	IMPLEMENTING AGENCY: CAVITE STATE UNIVERSITY	SHT NO.: E - 5



○ UPPER FLOOR ACU LAYOUT
SCALE 1 : 250 MTS.

CADD BY: E. N. RODEROS JR. <small>PPU CVPPD</small>	END USER: J. P. CUBILLO <small>DEAN CSPEAR</small>	REC. APPROVAL: M. M. ESCOBAR <small>VPPPD CVSU</small>		REC. APPROVAL: G. A. POLINGA <small>VPASS CVSU</small>	APPROVED BY: H. D. ROBLES <small>PRES CVSU</small>	PROJECT TITLE/ LOCATION: PROPOSED ELECTRICAL REWIRING HUMAN KINETICS BLDG. (GYMNASIUM) <small>CVSU, MAIN CAMPUS</small>	IMPLEMENTING AGENCY CAVITE STATE UNIVERSITY	SHT NO: E - 6
ELECT. ENGR. EFREN ROCILLO <small>PPU CVPPD</small>	ENDORSED BY: O. B. DELOS REYES <small>DIRECTOR PLANNING OFFICE</small>	REC. APPROVAL: M. M. ESCOBAR <small>VPPPD CVSU</small>		REC. APPROVAL: G. A. POLINGA <small>VPASS CVSU</small>	APPROVED BY: H. D. ROBLES <small>PRES CVSU</small>	PROJECT TITLE/ LOCATION: PROPOSED ELECTRICAL REWIRING HUMAN KINETICS BLDG. (GYMNASIUM) <small>CVSU, MAIN CAMPUS</small>	IMPLEMENTING AGENCY CAVITE STATE UNIVERSITY	SHT NO: E - 6

SCHEDULE OF LOADS

PANEL BOARD: LOWER FLOOR ACU PANEL (LFAP)

3-Phase 3-Wire + Ground, 230 volts surface mounted

Circuit No.	PANEL DESCRIPTION	No. OF OUTLETS	VOLTS	VOLT-AMPS	AMPERE				Size of Conductor		Size Of Conduit In. Min. ø	NEMA 1 ENCLOSURE				
					3-Ø (ABC)	AB	BC	CA	SQ. MM THHN	SQ. MM THW		Circuit Protection				
												AT	AF	POLE	TYPE	
1	ACU (2HP)	1	230	2830		12.30				2-3.5	+ 1-2.0 THW	15	30	100	2	B-ON
2	ACU (2HP)	1	230	2830		12.30				2-3.5	+ 1-2.0 THW	15	30	100	2	B-ON
4	ACU (3TR)	1	230	4140				29.48	29.48	2-8.0	+ 1-3.5 THW	20	50	100	2	B-ON
3	ACU (3TR)	1	230	4140						2-8.0	+ 1-3.5 THW	20	50	100	2	B-ON
8	ACU (3TR)	1	230	4140			29.48		29.48	2-8.0	+ 1-3.5 THW	20	50	100	2	B-ON
5	ACU (3TR)	1	230	4140			29.48			2-8.0	+ 1-3.5 THW	20	50	100	2	B-ON
6	ACU (3TR)	1	230	4140			29.48			2-8.0	+ 1-3.5 THW	20	50	100	2	B-ON
7	ACU (3TR)	1	230	4140			29.48			2-8.0	+ 1-3.5 THW	20	50	100	2	B-ON
9	ACU (3TR)	1	230	4140				29.48	29.48	2-8.0	+ 1-3.5 THW	20	50	100	2	B-ON
10	SPARE		230	2830			12.30			PROVIDE STUB OUT		15	30	100	2	B-ON
11	SPARE		230	2830			12.30			PROVIDE STUB OUT		15	30	100	2	B-ON
12	SPARE		230	1000						PROVIDE STUB OUT		15	30	100	2	B-ON
13	ACU (3TR)	1	230	11743	31.45					3-8.0 (R/B/Y)	+ 1-5.5 THW	20	50	150	3	B-ON
14	ACU (3TR)	1	230	11743	31.45					3-8.0 (R/B/Y)	+ 1-5.5 THW	20	50	150	3	B-ON
15	ACU (3TR)	1	230	11743	31.45					3-8.0 (R/B/Y)	+ 1-5.5 THW	20	50	150	3	B-ON
16	ACU (3TR)	1	230	11743	31.45					3-8.0 (R/B/Y)	+ 1-5.5 THW	20	50	150	3	B-ON
TOTAL			230	85772	126	84	84	88		3-100(R/B/Y)	+ 1-80 THW	50	350	400	3	B-ON

MAIN FEEDER and CURRENT PROTECTION COMPUTATION:

$I_{FL} = \frac{[126 \times 84 \times 1.732] - (0.25 \times 29.48)}{1.732} = 228.63$ Amperes

USE: FEEDER: 3-100 SQ. MM THHN + 1-80 SQ. MM THW (Ø) in - 50 MM dia IMC or Equiv.

$I_{CB} = \frac{[126 \times 84 \times 1.732] - (2.5 \times 29.48)}{1.732} = 308.19$ Amperes

USE: MAIN CB : 350 AT, 400 AF, 3P, 230V, 25 kAIC

PANEL BOARD: UPPER FLOOR ACU PANEL (UFAP)

3-Phase 3-Wire + Ground, 230 volts surface mounted

Circuit No.	PANEL DESCRIPTION	No. OF OUTLETS	VOLTS	VOLT-AMPS	AMPERE				Size of Conductor		Size Of Conduit In. Min. ø	NEMA 1 ENCLOSURE				
					3-Ø (ABC)	AB	BC	CA	SQ. MM THHN	SQ. MM THW		Circuit Protection				
												AT	AF	POLE	TYPE	
1	ACU (2HP)	1	230	2830		12.30				2-5.5	+ 1-2.5 THW	15	30	100	2	B-ON
2	ACU (2HP)	1	230	2830		12.30				2-5.5	+ 1-2.5 THW	15	30	100	2	B-ON
3	ACU (2HP)	1	230	2830				12.30		2-5.5	+ 1-2.5 THW	15	30	100	2	B-ON
4	ACU (2HP)	1	230	2830				12.30		2-5.5	+ 1-2.5 THW	15	30	100	2	B-ON
5	SPARE									PROVIDE STUB OUT						
6	SPARE									PROVIDE STUB OUT						
7	ACU (20TR)	1	230	40314	101.2					3-38.0	+ 1-22.0 THW	50	125	150	3	B-ON
8	ACU (20TR)	1	230	40314	101.2					3-38.0	+ 1-22.0 THW	50	125	150	3	B-ON
9	ACU (20TR)	1	230	40314	101.2					3-38.0	+ 1-22.0 THW	50	125	150	3	B-ON
10	ACU (20TR)	1	230	40314	101.2					3-38.0	+ 1-22.0 THW	50	125	150	3	B-ON
11	ACU (20TR)	1	230	40314	101.2					3-38.0	+ 1-22.0 THW	50	125	150	3	B-ON
12	ACU (20TR)	1	230	40314	101.2					3-38.0	+ 1-22.0 THW	50	125	150	3	B-ON
13	ACU (10TR)	1	230	52.8						3-14.0	+ 1-22.0 THW	20	70	100	2	B-ON
14	ACU (10TR)	1	230	52.8						3-14.0	+ 1-22.0 THW	20	70	100	2	B-ON
15	SPARE									PROVIDE STUB OUT						
16	SPARE									PROVIDE STUB OUT						
TOTAL			230	11320	719	25	0	25		3 sets of 3-80	+ 1-60 THW	50	800	1000	3	B-ON

MAIN FEEDER and CURRENT PROTECTION COMPUTATION:

$I_{FL} = \frac{[719 \times 25 \times 1.732] - (0.25 \times 29.48)}{1.732} = 810.04$ Amperes

USE: FEEDER: 3 sets of 3-80 SQ. MM THHN + 1-60 SQ. MM THW (Ø) in - 50 MM dia IMC or Equiv.

$I_{CB} = \frac{[719 \times 25 \times 1.732] - (2.5 \times 29.48)}{1.732} = 710.00$ Amperes

USE: MAIN CB : 800 AT, 1000 AF, 3P, 230V, 25 kAIC

CADD BY: E. N. RODEROS JR. PPU OVPDP	END USER: J. P. CUBILLO DEAN CSPEAR
ELECT. ENGR. EFREN ROCILLO PPU OVPDP	ENDORSED BY: O. B. DE LOS REYES DIRECTOR PLANNING OFFICE

REC. APPROVAL: M. M. ESCOBAR VPPDP CVSU	REC. APPROVAL: C. A. POLINGA VPASS CVSU	APPROVED BY: J. D. ROBLES PRES CVSU	PROJECT TITLE/LOCATION: PROPOSED ELECTRICAL REWIRING HUMAN KINETICS BLDG. (GYMNASIUM) CVSU, MAIN CAMPUS	IMPLEMENTING AGENCY: CAVITE STATE UNIVERSITY	SHT NO.: E - 7
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SCHEDULE OF LOADS

PANEL BOARD: LOWER FLOOR LP PANEL (LFLP)

3 - Phase 3 - Wire + Ground, 230 volts surface mounted

Circuit No.	PANEL DESCRIPTION	No. OF OUTLETS	VOLTS	VOLT-AMPS	AMPERE				Size of Conductor		Size Of Conduit In MM φ	NEMA 1 ENCLOSURE				
					3-Ø	AB	BC	CA	SQ. MM THHN	SQ. MM THW		Circuit Protection				
												AT	AF	POLE	TYPE	
1	LIGHTING OUTLET	23	230	2,300.00		10.08				2-2.0	+ 1-2.0 THW	15	15	100	2	B-ON
2	LIGHTING OUTLET	20	230	2,000.00		8.70				2-2.0	+ 1-2.0 THW	15	15	100	2	B-ON
3	LIGHTING OUTLET	22	230	2,300.00				9.57		2-2.0	+ 1-2.0 THW	15	15	100	2	B-ON
4	LIGHTING OUTLET	27	230	2,700.00				11.74		2-3.5	+ 1-2.0 THW	15	20	100	2	B-ON
5	LIGHTING OUTLET	18	230	1,800.00			7.83			2-2.0	+ 1-2.0 THW	15	15	100	2	B-ON
6	LIGHTING OUTLET	24	230	2,400.00			10.43			2-2.0	+ 1-2.0 THW	15	15	100	2	B-ON
7	LIGHTING OUTLET	30	230	3,000.00		13.04				2-3.5	+ 1-2.0 THW	15	20	100	2	B-ON
8	CONV. OUTLET	12	230	2,400.00		10.43				2-3.5	+ 1-2.0 THW	15	20	100	2	B-ON
9	CONV. OUTLET	15	230	3,000.00				13.04		2-3.5	+ 1-2.0 THW	15	20	100	2	B-ON
10	CONV. OUTLET	12	230	2,400.00			10.43			2-3.5	+ 1-2.0 THW	15	20	100	2	B-ON
11	CONV. OUTLET	12	230	2,400.00			10.43			2-3.5	+ 1-2.0 THW	15	20	100	2	B-ON
12	CONV. OUTLET	12	230	2,400.00				10.43		2-3.5	+ 1-2.0 THW	15	20	100	2	B-ON
13	CONV. OUTLET	13	230	2,600.00		11.30				2-3.5	+ 1-2.0 THW	15	20	100	2	B-ON
14	SPARE		230	2,000.00		8.70				PROVIDE STUB OUT		15	20	100	2	B-ON
15	SPARE		230	2,000.00			8.70			PROVIDE STUB OUT		15	20	100	2	B-ON
16	SPARE		230	2,000.00				8.70		PROVIDE STUB OUT		15	20	100	2	B-ON
	TOTAL		230	37,600.00		62	48	53		3-14.0	+ 1-8.0 THW	20	100	150	3	B-ON

MAIN FEEDER and CURRENT PROTECTION COMPUTATION:

$I_{FL} = \frac{100 \times 1,730 \times 0.25 \times 0.8 \times F_e}{\sqrt{3}} = 85.91 \text{ Amperes}$

USE FEEDER: 3 - 14.0 SQ. MM THHN (R/B/V) + 1 - 8.0 SQ. MM THW (G) in - 20 MM dia IMC or Equip.

$I_{th} = \frac{100 \times 1,730 \times (2.5 \times 0.8 \times 1.18 \times F_e)}{\sqrt{3}} = 93.36 \text{ Amperes}$

USE MAIN CB : 100 AT, 150 AF, 3P, 230V, 25 kAIC

PANEL BOARD: UPPER GROUND FLOOR LP PANEL (UGFLP)

3 - Phase 3 - Wire + Ground, 230 volts surface mounted

Circuit No.	PANEL DESCRIPTION	No. OF OUTLETS	VOLTS	VOLT-AMPS	AMPERE				Size of Conductor		Size Of Conduit In MM φ	NEMA 1 ENCLOSURE				
					3-Ø	AB	BC	CA	SQ. MM THHN	SQ. MM THW		Circuit Protection				
												AT	AF	POLE	TYPE	
1	LIGHTING OUTLET	14	230	2,800.00		12.17				2-3.5	+ 1-2.0 THW	15	20	100	2	B-ON
2	LIGHTING OUTLET	8	230	4,000.00		17.39				2-5.5	+ 1-2.0 THW	20	30	100	2	B-ON
3	LIGHTING OUTLET	22	230	2,200.00				9.57		2-2.0	+ 1-2.0 THW	15	15	100	2	B-ON
4	LIGHTING OUTLET	9	230	4,500.00				19.57		2-5.5	+ 1-2.0 THW	20	30	100	2	B-ON
5	LIGHTING OUTLET	27	230	2,700.00			11.74			2-2.0	+ 1-2.0 THW	15	20	100	2	B-ON
6	LIGHTING OUTLET	6	230	4,000.00			17.39			2-5.5	+ 1-2.0 THW	20	30	100	2	B-ON
7	LIGHTING OUTLET	25	230	2,300.00		10.00				2-2.0	+ 1-2.0 THW	15	15	100	2	B-ON
8	LIGHTING OUTLET	14	230	2,800.00		12.17				2-3.5	+ 1-2.0 THW	15	20	100	2	B-ON
9	LIGHTING OUTLET	22	230	2,200.00				9.57		2-2.0	+ 1-2.0 THW	15	15	100	2	B-ON
10	LIGHTING OUTLET	22	230	2,200.00				9.57		2-2.0	+ 1-2.0 THW	15	15	100	2	B-ON
11	CONV. OUTLET	15	230	2,750.00			11.74			2-3.5	+ 1-2.0 THW	15	20	100	2	B-ON
12	CONV. OUTLET	12	230	2,160.00			9.39			2-3.5	+ 1-2.0 THW	15	20	100	2	B-ON
13	CONV. OUTLET	14	230	2,520.00		10.86				2-3.5	+ 1-2.0 THW	15	20	100	2	B-ON
14	SPARE		230	2,500.00		10.87				PROVIDE STUB OUT		15	20	100	2	B-ON
15	SPARE		230	2,000.00			10.87			PROVIDE STUB OUT		15	20	100	2	B-ON
16	SPARE		230	2,000.00			10.87			PROVIDE STUB OUT		15	20	100	2	B-ON
17	CONV. OUTLET	12	230	2,160.00			19.17			2-5.5	+ 1-2.0 THW	20	30	100	2	B-ON
18	CONV. OUTLET	11	230	1,980.00			8.61			2-3.5	+ 1-2.0 THW	15	20	100	2	B-ON
	TOTAL		230	48,880.00		74	78	70		3-22.0	+ 1-14.0 THW(G)	40	125	150	3	B-ON

MAIN FEEDER and CURRENT PROTECTION COMPUTATION:

$I_{FL} = \frac{100 \times 0.25 \times 0.8 \times F_e}{\sqrt{3}} = 108.05 \text{ Amperes}$

USE FEEDER: 3 - 22 SQ. MM THHN (R/B/V) + 1 - 14.0 SQ. MM THW (G) in - 25 MM dia IMC or Equip.

$I_{th} = \frac{100 \times 0.8 \times 0.8 \times 1.18 \times F_e}{\sqrt{3}} = 117.47 \text{ Amperes}$

USE MAIN CB : 125 AT, 150 AF, 3P, 230V, 25 kAIC

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SCHEDULE OF LOADS

PANEL BOARD: MAIN DISTRIBUTION PANEL (MDP)																
3 - Phase 3 - Wire + Ground, 230 volts surface mounted																
Circuit No.	PANEL	PANEL DESCRIPTION	VOLTS	VOLT-AMPS	AMPERE				Size of Conductor		Size Of Conduit In MM ø	NEMA 1 ENCLOSURE				
					3-Ø	AB	BC	CA	MM ² THHN	MM ² THHN		AT	AF	POLE	TYPE	
1	LGFLPP	LOWER FLOOR LP PANEL	230	24200		62	48	53	3 - 14.0	+	1 - 8.0 THW	20	100	150	3	B - ON
2	UGFLPP	UPPER FLOOR LP PANEL	230	47720		74	78	70	3 - 22.0	+	1 - 14 THW	25	125	150	3	B - ON
3	LGFAF	LOWER FLOOR ACU PANEL	230	54960	126	84	84	88	3 - 100.0	+	1 - 80 THW	50	350	400	3	B - ON
4	UGFAF	UPPER FLOOR ACU PANEL	230	335828	713	25	0	25	3 sets of 3-80	+	1 - 60THW	50	800	1000	3	B - ON
5	FACP	FIRE ALARM CONTROL PANEL	230	500				2	2 - 2.0	+	1 - 2.0 THW	15	20	100	2	B - ON
8		SPARE	230													
9		SPARE	230													
10		SPARE	230													
	TOTAL		230	463208	839	245	212	236	3sets of 3- 17:	+	1 - 150 THW	65; 1 - 25(G)	1200	1200	3	B - ON

FEEDER and CURRENT PROTECTION COMPUTATION:

$I_{FL} = \frac{[839 + 245 \cdot 1.732 + (0.25 \times 20.48)]}{\sqrt{3}} = 1016.57 \text{ Amperes}$

USE: FEEDER: 3 sets of 3-125 SQ. MM THHN (R/B/Y) + 1 - 100 SQ MM THW (G) in 3 - 65 MM dia IMC or Equiv; 1-25MM dia IMC(G)

$I_{cb} = \frac{[839 + 245 \cdot 1.732 + 1.5 \times 20.48]}{1.15} = 1137.01 \text{ Amperes}$

USE: MAIN CB : 1200 AT, 1200 AF, 3P, 230V, 65 kaic

TRANSFORMER SIZE	4621.74 ≈ 500
USE:	3 unit -167 KVA Pole Mounted Distribution Transformer, 13.8kV 240/ 120v.
GENERATOR SIZE	
USE:	1 unit -625 KVA , 240V/120V, 3 PHASE, 60 HZ, STAND BY GENERATOR, WATER COOLED DIESEL ENGINE

PANEL BOARD: FIRE PUMP PANEL (MDP)																
3 - Phase 3 - Wire + Ground, 230 volts surface mounted																
Circuit No.	PANEL	PANEL DESCRIPTION	VOLTS	VOLT-AMPS	AMPERE				Size of Conductor		Size Of Conduit In MM ø	NEMA 1 ENCLOSURE				
					3-Ø	AB	BC	CA	MM ² THHN	MM ² THHN		AT	AF	POLE	TYPE	
1	FPUMP25	FIRE PUMP (25HP)	230	15640	68				3 - 250.0	+	1 - 200.0 THW	80	400	400	3	B - ON
	TOTAL		230	15640	68				3 - 250.0	+	1 - 200 THW	80	400	400	3	B - ON

CADD BY: E. N. RODEROS JR. <small>PPU OVPPO</small>	END USER: J. P. CUBILLO <small>DEAN CSPEAR</small>
ELECTL. ENGR. EFREN ROCILLO <small>PPU OVPPO</small>	ENDORSED BY: O. B. DELOS REYES <small>DIRECTOR PLANNING OFFICE</small>

REC. APPROVAL: J. M. ESCOBAR <small>VPPPD CVSU</small>	REC. APPROVAL: C. A. POLINCA <small>VPASS CVSU</small>	APPROVED BY: H. D. ROBLES <small>PPRES CVSU</small>	PROJECT TITLE/ LOCATION: PROPOSED ELECTRICAL REWIRING HUMAN KINETICS BLDG. (GYMNASIUM) <small>CVSU, MAIN CAMPUS</small>	IMPLEMENTING AGENCY: CAVITE STATE UNIVERSITY	SHT NO: E - 9
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