

FOURTH FLOOR LIGHTING LAYOUT
 SCALE: 1:200 MTS.

CADD BY:	LOPELEY M. BOLLAR PPU OVPPD
PROFESSIONAL SPECIAL ENGR.	RONALDO P. FENIX PPU OVPPD
END USER:	M. MACALALAD CVSU-BACCOR DEAN

ENDORSED BY:
 O. P. OSORIO
 PLANNING OFFICE

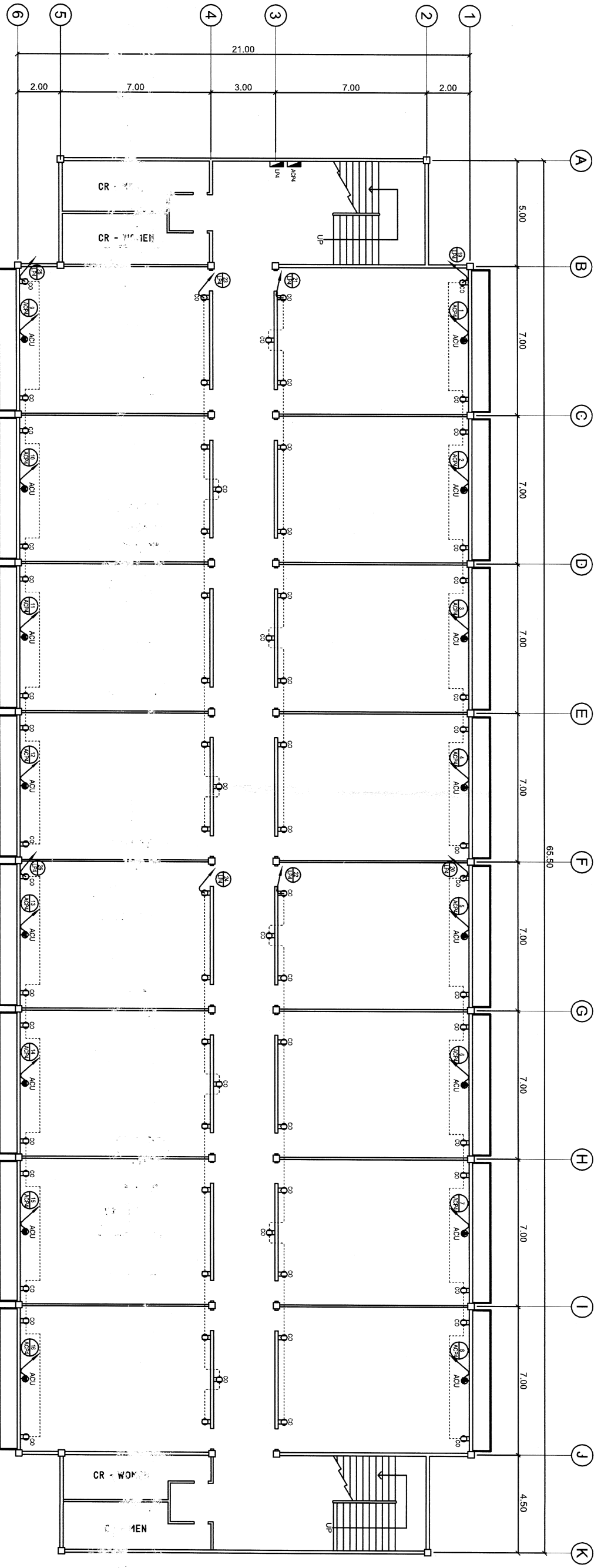
REC. APPROVAL:
 M. M. ESCOBAR
 VPPD

APPROVED BY:
 J. A. RODRIGUEZ
 CVSU

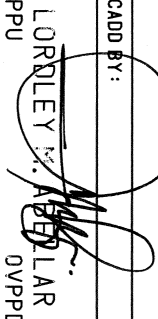
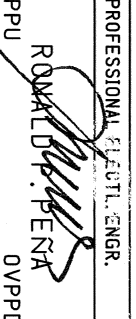
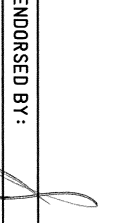

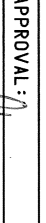
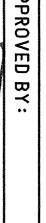
PROJECT TITLE/LOCATION:
 IMPROVEMENT OF BACCOR CAMPUS
 BACCOR CITY

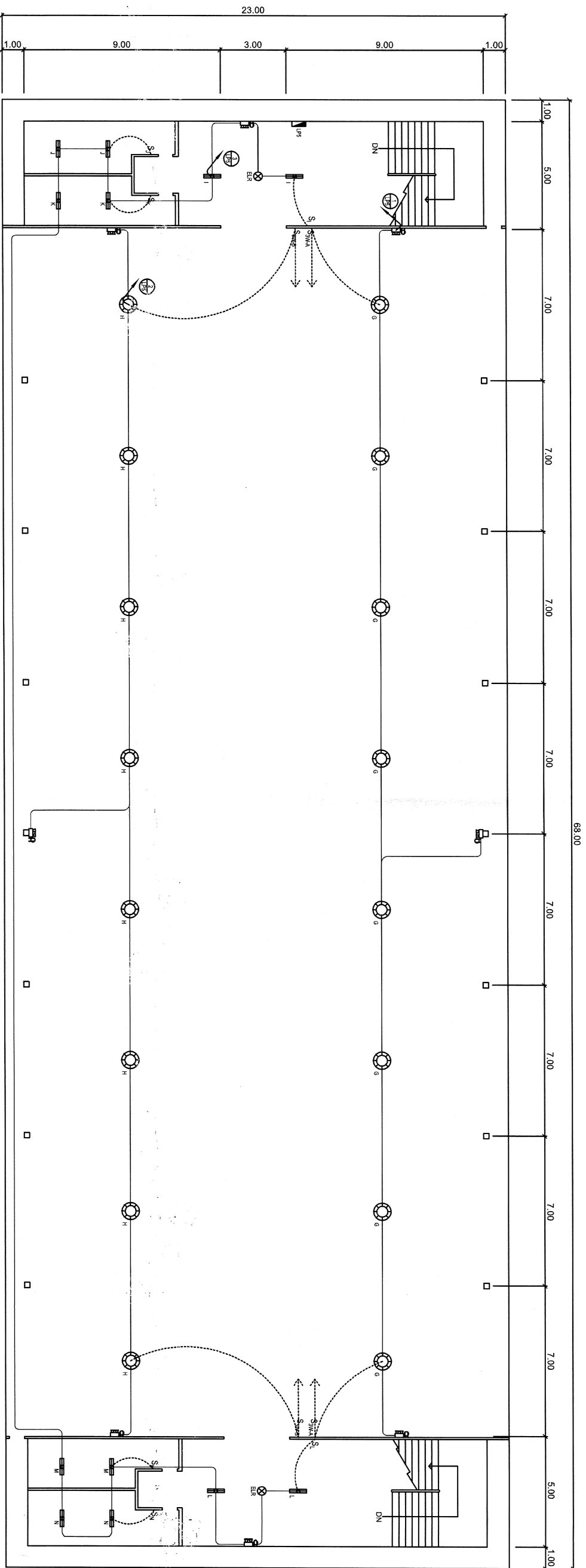
IMPLEMENTING AGENCY:
 CAVITE STATE UNIVERSITY

SHT NO.: E-1



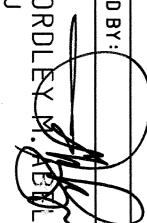
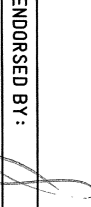
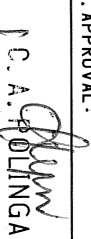


1 / 2 SCALE: 1:200 MTS.

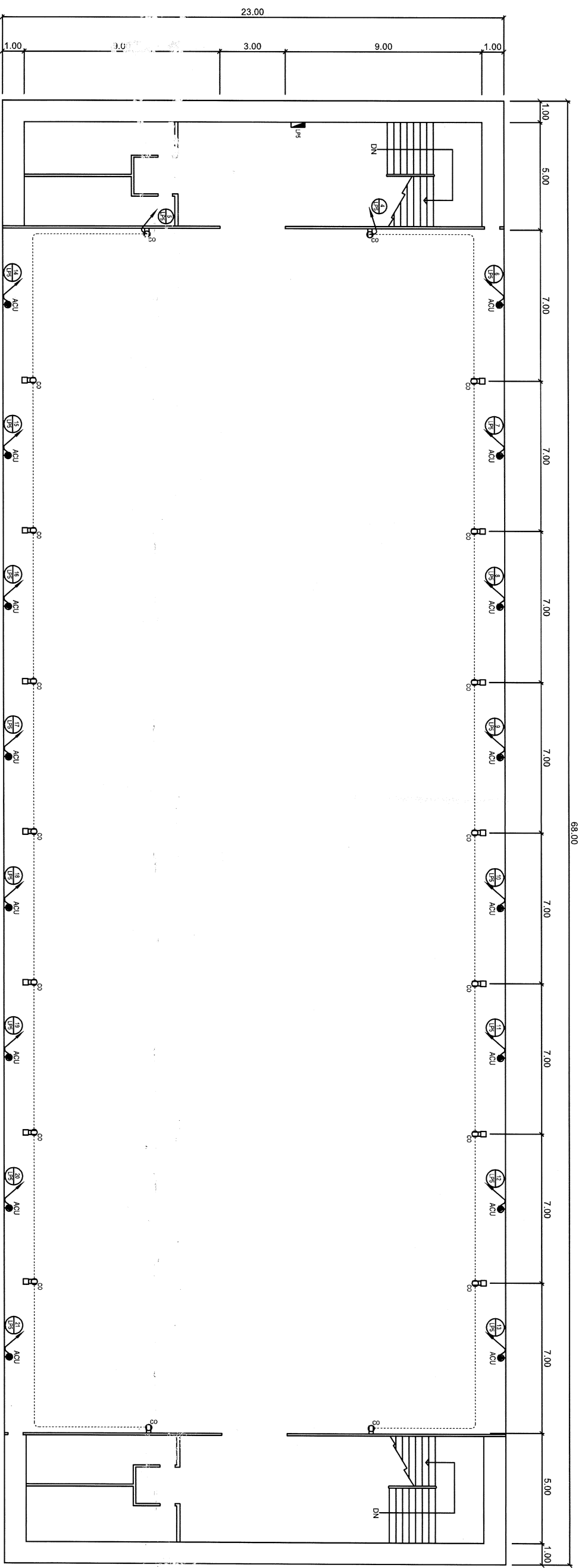
CADD BY:  LORLEY M. ABDALAR PPU PROFESSIONAL ELECTL. ENGR. PPU  RONALD D. FERRA OVPDPD	ENDORSED BY:  O. B. DE JESUS DIRECTOR PLANNING OFFICE	REC. APPROVAL:  M. M. ESCOBAR VPPD  J. A. POLINGA VPASS	APPROVED BY:  H. D. RODEL PRES	PROJECT TITLE / LOCATION: IMPROVEMENT OF BACCOOR CAMPUS BACCOOR CITY	IMPLEMENTING AGENCY: CAVITE STATE UNIVERSITY	SHT NO.: E - 2
END USER: M. MACALALAD DEAN CVSU-BACCOOR						

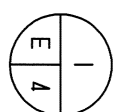




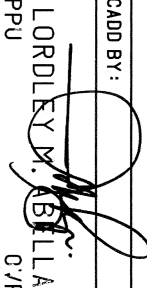
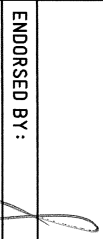
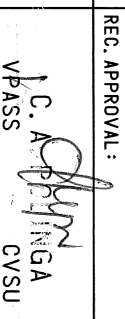
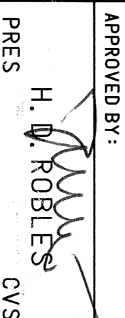
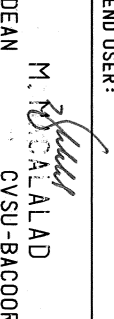
 ROOF DECK LIGHTING LAYOUT
 SCALE: 1:200 MTS.

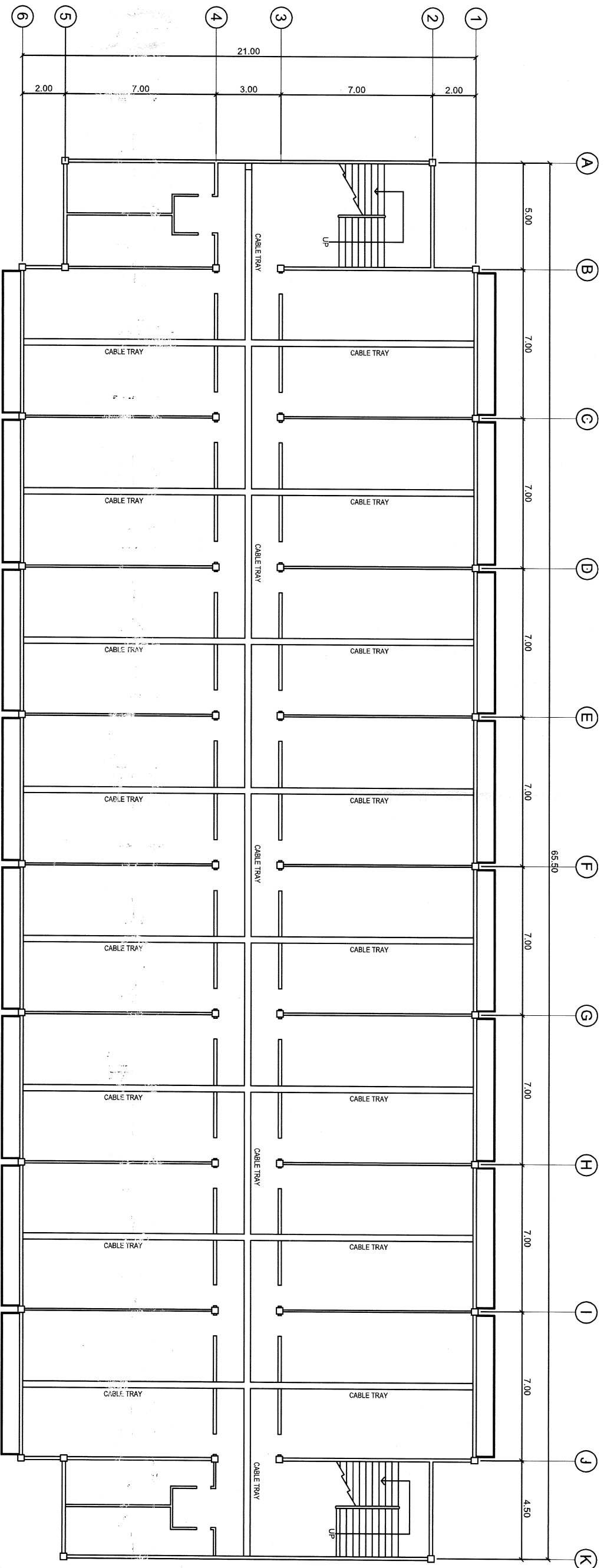
CADD BY:  LORDLEY M. ABDALLAR PPU OVPDP PROFESSIONAL ELECTL. ENGR.	ENDORSED BY:  G. B. DELOS REYES DIRECTOR PLANNING OFFICE	REC. APPROVAL:  J. C. A. DOMINGA VPASS CVSU	APPROVED BY:  H. D. ROBLES PRES CVSU	PROJECT TITLE / LOCATION: IMPROVEMENT OF BACCOOR CAMPUS CVSU - BACCOOR CAMPUS BACCOOR CITY	IMPLEMENTING AGENCY: CAVITE STATE UNIVERSITY	SHIT NO.: E - 3
END USER:  RONALD M. MEDINA PPU OVPDP	M. MACALALAD CVSU-BACCOOR DEAN	M. M. ESCOBAR VPPD CVSU	H. D. ROBLES PRES CVSU	IMPROVEMENT OF BACCOOR CAMPUS CVSU - BACCOOR CAMPUS BACCOOR CITY	CAVITE STATE UNIVERSITY	E - 3





 ROOF DECK C.O. & A/C LAYOUT
 SCALE: 1:200 M.T.S.

CADD BY:  LORDLEY M. BILLAR PPU C/P/PPD PROFESSIONAL ELECTL. ENGR.	ENDORSED BY:  O. B. DELOS REYES DIRECTOR PLANNING OFFICE	REC. APPROVAL:  J. C. ARPINA VPASS CVSU	APPROVED BY:  H. D. ROBLES PRES CVSU
END USER:  M. ESCOBAR CVSU-BACCOOR	PROJECT TITLE / LOCATION: IMPROVEMENT OF BACCOOR CAMPUS BACCOOR CITY		
DEAN M. ESCOBAR CVSU-BACCOOR		IMPLEMENTING AGENCY: CAVITE STATE UNIVERSITY	
		SHT NO: E - 4	



FOURTH FLOOR CABLE TRAY LAYOUT
 SCALE: 1/5

CADD BY:

LORDEY M. BILLAR
 PPU
 OVPDP
 PROFESSIONAL ELECTL. ENGR.

PPU
 RONALDO F. MENA
 OVPDP

END USER:

M. MACALALAD
 DEAN
 CVSU-BACCOOR

ENDORSED BY:

O. B. DELOS REYES
 DIRECTOR
 PLANNING OFFICE

REC. APPROVAL:

M. ESCOBAR
 VPDP
 CVSU

APPROVED BY:

H. D. ROBLES
 PRES
 CVSU

PROJECT TITLE/LOCATION:

IMPROVEMENT OF BACCOOR CAMPUS
 BACCOOR CITY

IMPLEMENTING AGENCY

CAVITE STATE UNIVERSITY

SHT NO:

E - 5

SCHEDULE OF LOADS

PANEL: MDP
 PHASE: 1
 VOLTS: 230

CABLE: 2 sets 2 - 250 SQMM THHN + 1 - 38.0 SQMM THHN
 MAIN: 800AT, 800AF, 2P, 230V, 55KAIC, CB
 ENCLOSURE: NEMA 1
 CONDUIT: RSC, 2 - 100 MM DIA.
 MOUNTING: SURFACE

Ckt No.	PANEL CODE	PANEL DESCRIPTION	WATTS	VOLT	AMP	CIRCUIT PROTECTION	Size of Conductor	Color Code
							sq. mm THHN	
1	LPP4	LIGHTING AND POWER PANEL 4	34480	230	149.83	125AT, 2P, 10 KAIC	2 - 38.0 + G 8.0	1R, 1BK, G
2	ACPP4	AIR CONDITIONER AND POWER PANEL 4	47744	230	368.00	350AT, 2P, 35 KAIC	2 - 200 + G 14.0	1R, 1BK, G
3	LPP5	LIGHTING AND POWER PANEL 5	57184	230	409.04	400AT, 2P, 35 KAIC	2 - 200 + G 14.0	1R, 1BK, G
4		SPACE						
FEEDER and CURRENT PROTECTION COMPUTATION:			139388	230	926.87	800AT, 2P, 65 KAIC	2 - 2 - 200 + G 38.0	1R, 1BK, G

NOTE:
 G - Means Ground Wire
 1R - Color RED
 1BK - Color BLACK
 1G - Color GREEN

$I_{FE} = [\frac{926.87 + 25\% \times \text{lim}]}{DF} = 741.50$ Amperes
 use: 2 sets 2 - 250 SQMM THHN + 1 - 38.0 SQMM THHN IN 2 - 100 MM DIA. RSC
 $ICB = [\frac{926.87 + 250\% \times \text{lim}]}{DF} = 741.50$ Amperes
 use: 800AT, 800AF, 2P, 230V, 55KAIC, CB

PREPARED BY: RONALD P. PENA
 Professional Electrical Engineer
 PRC # 3857
 Expiry: April 1, 2025
 PTR # CAV5504164 B
 Date: Jan. 03, 2022
 Place: Indang, Cavite
 TIN # 102-441-998

PANEL: LP4
 PHASE: 1
 VOLTS: 230


CABLE: 2 - 38.0 SQ. MM THHN + G 8.0 SQ. MM THHN
 MAIN: 125AT, 225AF, 2P, 230V, 18 KAIC, MCGCB
 ENCLOSURE: NEMA 1
 CONDUIT: RSC, 32 MM DIA.
 MOUNTING: SURFACE

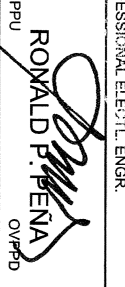
Ckt No.	NO. OF OUTLETS	PANEL DESCRIPTION	WATTS	VOLT	AMP	CIRCUIT PROTECTION	Size of Conductor	Color Code
							sq. mm THHN	
1	10	8-L.O. + 2-E.L.	1180	230	5.04	20AT, 2P, 10 KAIC	2 - 3.5	1R, 1BK, G
2	9	8-L.O. + 1-E.L.	980	230	4.26	20AT, 2P, 10 KAIC	2 - 3.5	1R, 1BK, G
3	9	8-L.O. + 1-E.L.	980	230	4.26	20AT, 2P, 10 KAIC	2 - 3.5	1R, 1BK, G
4	9	8-L.O. + 1-E.L.	980	230	4.26	20AT, 2P, 10 KAIC	2 - 3.5	1R, 1BK, G
5	10	8-L.O. + 2-E.L.	1180	230	5.04	20AT, 2P, 10 KAIC	2 - 3.5	1R, 1BK, G
6	9	8-L.O. + 1-E.L.	980	230	4.26	20AT, 2P, 10 KAIC	2 - 3.5	1R, 1BK, G
7	8	CEILING FAN	1440	230	6.26	20AT, 2P, 10 KAIC	2 - 3.5 + G 2.0	1R, 1BK, G
8	8	CEILING FAN	1440	230	6.26	20AT, 2P, 10 KAIC	2 - 3.5 + G 2.0	1R, 1BK, G
9	9	8-L.O. + 1-E.L.	980	230	4.26	20AT, 2P, 10 KAIC	2 - 3.5	1R, 1BK, G
10	9	8-L.O. + 1-E.L.	980	230	4.26	20AT, 2P, 10 KAIC	2 - 3.5	1R, 1BK, G
11	10	8-L.O. + 2-E.L.	1180	230	5.04	20AT, 2P, 10 KAIC	2 - 3.5	1R, 1BK, G
12	9	8-L.O. + 1-E.L.	980	230	4.26	20AT, 2P, 10 KAIC	2 - 3.5	1R, 1BK, G
13	9	8-L.O. + 1-E.L.	980	230	4.26	20AT, 2P, 10 KAIC	2 - 3.5	1R, 1BK, G
14	10	8-L.O. + 2-E.L.	980	230	4.26	20AT, 2P, 10 KAIC	2 - 3.5 + G 2.0	1R, 1BK, G
15	8	CEILING FAN	1440	230	6.26	20AT, 2P, 10 KAIC	2 - 3.5 + G 2.0	1R, 1BK, G
16	8	CEILING FAN	1440	230	6.26	20AT, 2P, 10 KAIC	2 - 3.5 + G 2.0	1R, 1BK, G
17	14	10-L.O. + 3-E.L. + 1-E.L.R	1720	230	7.48	20AT, 2P, 10 KAIC	2 - 3.5	1R, 1BK, G
18	14	10-L.O. + 3-E.L. + 1-E.L.R	1720	230	7.48	20AT, 2P, 10 KAIC	2 - 3.5	1R, 1BK, G
19	8	CONVENIENCE OUTLET	1440	230	6.26	20AT, 2P, 10 KAIC	2 - 3.5 + G 2.0	1R, 1BK, G
20	8	CONVENIENCE OUTLET	1440	230	6.26	20AT, 2P, 10 KAIC	2 - 3.5 + G 2.0	1R, 1BK, G
21	10	CONVENIENCE OUTLET	1800	230	7.83	20AT, 2P, 10 KAIC	2 - 3.5 + G 2.0	1R, 1BK, G
22	10	CONVENIENCE OUTLET	1800	230	7.83	20AT, 2P, 10 KAIC	2 - 3.5 + G 2.0	1R, 1BK, G
23	10	CONVENIENCE OUTLET	1800	230	7.83	20AT, 2P, 10 KAIC	2 - 3.5 + G 2.0	1R, 1BK, G
24	10	CONVENIENCE OUTLET	1800	230	7.83	20AT, 2P, 10 KAIC	2 - 3.5 + G 2.0	1R, 1BK, G
25	8	CONVENIENCE OUTLET	1440	230	6.26	20AT, 2P, 10 KAIC	2 - 3.5 + G 2.0	1R, 1BK, G
26	8	CONVENIENCE OUTLET	1440	230	6.26	20AT, 2P, 10 KAIC	2 - 3.5 + G 2.0	1R, 1BK, G
27		SPACE						
28		TOTAL	34460	230	149.83	125AT, 2P, 10 KAIC	2 - 38.0 + G 8.0	32

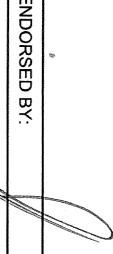
NOTE:
 G - Means Ground Wire
 1R - Color RED
 1BK - Color BLACK
 1G - Color GREEN

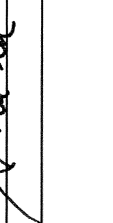
$I_{FE} = [\frac{149.83 + 25\% \times \text{lim}]}{DF} = 119.86$ Amperes
 use: 2 - 38 SQMM THHN + 1 - 8.0 SQMM THHN IN 32 MM DIA. RSC
 $ICB = [\frac{149.83 + 250\% \times \text{lim}]}{DF} = 119.86$ Amperes
 use: 125AT, 225AF, 2P, 230V, 18KAIC, CB


PREPARED BY: RONALD P. PENA
 Professional Electrical Engineer
 PRC # 3857
 Expiry: April 1, 2025
 PTR # CAV5504164 B
 Date: Jan. 03, 2022
 Place: Indang, Cavite
 TIN # 102-441-998

CADD BY: 
 LORDLEY M. BELLAR
 PPU
 PROFESSIONAL ELECTR. ENGR.
 OVPDP

END USER: 
 RONALD P. PENA
 PPU
 OVPDP

ENDORSED BY: 
 O.P. DE JESUS REYES
 DIRECTOR PLANNING OFFICE

REC. APPROVAL: 
 M.M. ESCOBAR
 VPPD


APPROVED BY: 
 H.P. FORBES
 PRES


DEAN: M. MACALALAD
 CVSU - BACCOOR

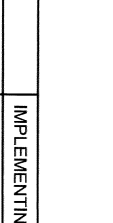
PROJECT TITLE/LOCATION: IMPROVEMENT OF BACCOOR CAMPUS
 BACCOOR CITY

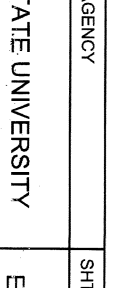
IMPLEMENTING AGENCY: CAVITE STATE UNIVERSITY

SHT NO.: E-7

END USER: 
 RONALD P. PENA
 PPU
 OVPDP

ENDORSED BY: 
 O.P. DE JESUS REYES
 DIRECTOR PLANNING OFFICE

REC. APPROVAL: 
 M.M. ESCOBAR
 VPPD

APPROVED BY: 
 H.P. FORBES
 PRES

DEAN: M. MACALALAD
 CVSU - BACCOOR

PROJECT TITLE/LOCATION: IMPROVEMENT OF BACCOOR CAMPUS
 BACCOOR CITY

IMPLEMENTING AGENCY: CAVITE STATE UNIVERSITY

SHT NO.: E-7

SCHEDULE OF LOADS

PANEL: ACP4
 PHASE: 1
 VOLTS: 230
 CABLE: 2 - 200.0 SQ. MM THHN + G 14.0 SQ MM THHN
 CONDUIT: RSC, 80 MM DIA.
 MAIN: 350 AT, 400AF, 2P, 230V, 35 KAIC, MCCB
 ENCLOSURE: NEMA 1
 MOUNTING: SURFACE

CKT NO.	NO. OF OUTLETS	PANEL DESCRIPTION	LOAD IN			CIRCUIT PROTECTION RATING	Size of Conductor		Size of Conduit in MM ²	Color Code
			WATTS	VOLT	AMP		SQ. MM THHN	SQ. MM THHN(G)		
1	1	ACU (4.0 HP)	2984	230	23.00	50AT, 2P, 10 KAIC	2 - 8.0	+ G 3.5	20	1R, 1BK, G
2	1	ACU (4.0 HP)	2984	230	23.00	50AT, 2P, 10 KAIC	2 - 8.0	+ G 3.5	20	1R, 1BK, G
3	1	ACU (4.0 HP)	2984	230	23.00	50AT, 2P, 10 KAIC	2 - 8.0	+ G 3.5	20	1R, 1BK, G
4	1	ACU (4.0 HP)	2984	230	23.00	50AT, 2P, 10 KAIC	2 - 8.0	+ G 3.5	20	1R, 1BK, G
5	1	ACU (4.0 HP)	2984	230	23.00	50AT, 2P, 10 KAIC	2 - 8.0	+ G 3.5	20	1R, 1BK, G
6	1	ACU (4.0 HP)	2984	230	23.00	50AT, 2P, 10 KAIC	2 - 8.0	+ G 3.5	20	1R, 1BK, G
7	1	ACU (4.0 HP)	2984	230	23.00	50AT, 2P, 10 KAIC	2 - 8.0	+ G 3.5	20	1R, 1BK, G
8	1	ACU (4.0 HP)	2984	230	23.00	50AT, 2P, 10 KAIC	2 - 8.0	+ G 3.5	20	1R, 1BK, G
9	1	ACU (4.0 HP)	2984	230	23.00	50AT, 2P, 10 KAIC	2 - 8.0	+ G 3.5	20	1R, 1BK, G
10	1	ACU (4.0 HP)	2984	230	23.00	50AT, 2P, 10 KAIC	2 - 8.0	+ G 3.5	20	1R, 1BK, G
11	1	ACU (4.0 HP)	2984	230	23.00	50AT, 2P, 10 KAIC	2 - 8.0	+ G 3.5	20	1R, 1BK, G
12	1	ACU (4.0 HP)	2984	230	23.00	50AT, 2P, 10 KAIC	2 - 8.0	+ G 3.5	20	1R, 1BK, G
13	1	ACU (4.0 HP)	2984	230	23.00	50AT, 2P, 10 KAIC	2 - 8.0	+ G 3.5	20	1R, 1BK, G
14	1	ACU (4.0 HP)	2984	230	23.00	50AT, 2P, 10 KAIC	2 - 8.0	+ G 3.5	20	1R, 1BK, G
15	1	ACU (4.0 HP)	2984	230	23.00	50AT, 2P, 10 KAIC	2 - 8.0	+ G 3.5	20	1R, 1BK, G
16	1	ACU (4.0 HP)	2984	230	23.00	50AT, 2P, 10 KAIC	2 - 8.0	+ G 3.5	20	1R, 1BK, G
17		SPARE								
18		SPARE								
		TOTAL	47744	230	368.00	350AT, 2P, 35 KAIC	2 - 200	+ G 14.0	80	1R, 1BK, G

FEEDER and CURRENT PROTECTION COMPUTATION:

NOTE: $I_{FE} = \frac{W}{V} = \frac{47744}{230} = 207.58$ Amperes
 $I_{FE} = \frac{W}{V} = \frac{36800}{230} = 160.00$ Amperes
 1R- Color RED use: 2 - 200.0 SQMM THHN + 1 - 14.0 SQMM THHN IN 80 MM DIA, RSC
 1G- Color BLACK use: 350AT, 400AF, 2P, 230V, 35KAIC, CB
 1G- Color GREEN use: 350AT, 400AF, 2P, 230V, 35KAIC, CB

PREPARED BY: RONALD P. PENIA
 Professional Electrical Engineer
 PRC # 3857
 Expiry: April 1, 2025
 PTR # CAV 5504164 B
 Date: Jan. 03, 2022
 Place: Indang, Cavite
 TIN # 102-441-998

This Electrical Design is good only for the above connected loads.
 Any additional electrical load connection in the future is prohibited.
 Except redesign of electrical load system will be done.

PANEL: LP5
 PHASE: 1
 VOLTS: 230
 CABLE: 2 - 200.0 SQ. MM THHN + G 14.0 SQ MM THHN
 CONDUIT: RSC, 80 MM DIA.
 MAIN: 400AT, 400AF, 2P, 230V, 35 KAIC, MCCB
 ENCLOSURE: NEMA 1
 MOUNTING: SURFACE


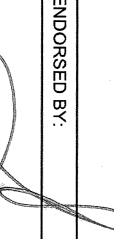
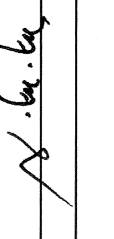
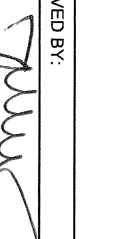
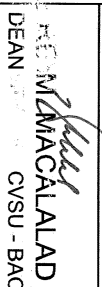
CKT NO.	NO. OF OUTLETS	PANEL DESCRIPTION	LOAD IN			CIRCUIT PROTECTION RATING	Size of Conductor		Size of Conduit in MM ²	Color Code
			WATTS	VOLT	AMP		SQ. MM THHN	SQ. MM THHN(G)		
1	11	8-L.O. + 3-E.L.	2140	230	9.30	20AT, 2P, 10 KAIC	2 - 3.5		15	1R, 1BK, G
2	11	8-L.O. + 3-E.L.	2140	230	9.30	20AT, 2P, 10 KAIC	2 - 3.5		15	1R, 1BK, G
3	9	12-L.O. + 2-E.L. + 2-EUR	1920	230	8.36	20AT, 2P, 10 KAIC	2 - 3.5		15	1R, 1BK, G
4	9	COMMENCEMENT OUTLET	1620	230	7.04	20AT, 2P, 10 KAIC	2 - 3.5	+ G 2.0	15	1R, 1BK, G
5	9	COMMENCEMENT OUTLET	1620	230	7.04	20AT, 2P, 10 KAIC	2 - 3.5	+ G 2.0	15	1R, 1BK, G
6	1	ACU (4.0 HP)	2984	230	23.00	50AT, 2P, 10 KAIC	2 - 8.0	+ G 3.5	20	1R, 1BK, G
7	1	ACU (4.0 HP)	2984	230	23.00	50AT, 2P, 10 KAIC	2 - 8.0	+ G 3.5	20	1R, 1BK, G
8	1	ACU (4.0 HP)	2984	230	23.00	50AT, 2P, 10 KAIC	2 - 8.0	+ G 3.5	20	1R, 1BK, G
9	1	ACU (4.0 HP)	2984	230	23.00	50AT, 2P, 10 KAIC	2 - 8.0	+ G 3.5	20	1R, 1BK, G
10	1	ACU (4.0 HP)	2984	230	23.00	50AT, 2P, 10 KAIC	2 - 8.0	+ G 3.5	20	1R, 1BK, G
11	1	ACU (4.0 HP)	2984	230	23.00	50AT, 2P, 10 KAIC	2 - 8.0	+ G 3.5	20	1R, 1BK, G
12	1	ACU (4.0 HP)	2984	230	23.00	50AT, 2P, 10 KAIC	2 - 8.0	+ G 3.5	20	1R, 1BK, G
13	1	ACU (4.0 HP)	2984	230	23.00	50AT, 2P, 10 KAIC	2 - 8.0	+ G 3.5	20	1R, 1BK, G
14	1	ACU (4.0 HP)	2984	230	23.00	50AT, 2P, 10 KAIC	2 - 8.0	+ G 3.5	20	1R, 1BK, G
15	1	ACU (4.0 HP)	2984	230	23.00	50AT, 2P, 10 KAIC	2 - 8.0	+ G 3.5	20	1R, 1BK, G
16	1	ACU (4.0 HP)	2984	230	23.00	50AT, 2P, 10 KAIC	2 - 8.0	+ G 3.5	20	1R, 1BK, G
17	1	ACU (4.0 HP)	2984	230	23.00	50AT, 2P, 10 KAIC	2 - 8.0	+ G 3.5	20	1R, 1BK, G
18	1	ACU (4.0 HP)	2984	230	23.00	50AT, 2P, 10 KAIC	2 - 8.0	+ G 3.5	20	1R, 1BK, G
19	1	ACU (4.0 HP)	2984	230	23.00	50AT, 2P, 10 KAIC	2 - 8.0	+ G 3.5	20	1R, 1BK, G
20	1	ACU (4.0 HP)	2984	230	23.00	50AT, 2P, 10 KAIC	2 - 8.0	+ G 3.5	20	1R, 1BK, G
21	1	ACU (4.0 HP)	2984	230	23.00	50AT, 2P, 10 KAIC	2 - 8.0	+ G 3.5	20	1R, 1BK, G
22		SPACE								
		TOTAL	57184	230	409.04	400AT, 2P, 35 KAIC	2 - 200	+ G 14.0	80	1R, 1BK, G

FEEDER and CURRENT PROTECTION COMPUTATION:

NOTE: $I_{FE} = \frac{W}{V} = \frac{57184}{230} = 248.62$ Amperes
 $I_{FE} = \frac{W}{V} = \frac{40904}{230} = 177.84$ Amperes
 G - Neutral Ground Wire use: 2 - 200.0 SQMM THHN + 1 - 14 SQMM THHN IN 80 MM DIA, RSC
 1R- Color RED use: 400AT, 400AF, 2P, 230V, 35KAIC, CB
 1BK- Color BLACK use: 400AT, 400AF, 2P, 230V, 35KAIC, CB
 1G- Color GREEN use: 400AT, 400AF, 2P, 230V, 35KAIC, CB

PREPARED BY: RONALD P. PENIA
 Professional Electrical Engineer
 PRC # 3857
 Expiry: April 1, 2025
 PTR # CAV 5504164 B
 Date: Jan. 03, 2022
 Place: Indang, Cavite
 TIN # 102-441-998

This Electrical Design is good only for the above connected loads.
 Any additional electrical load connection in the future is prohibited.
 Except redesign of electrical load system will be done.

CADD BY:  LORDELEY M. AGELLAR PPU PROFESSIONAL ELECTRICAL ENGINEER OVP/PPD	ENDORSED BY:  O.B. DELOS SERES DIRECTOR PLANNING OFFICE CVSU - BACCOOR	REC. APPROVAL:  M.M. ESCOBAR VPPD CVSU	APPROVED BY:  H.D. ROBLES PRES CVSU
END USER:  M. MACALALAD DEAN CVSU - BACCOOR	PROJECT TITLE/LOCATION: IMPROVEMENT OF BACCOOR CAMPUS BACCOOR CITY		
IMPLEMENTING AGENCY: CAVITE STATE UNIVERSITY			SHT NO.: E - 8

CADD BY:
LORDLEY M. BELLAR
 PPU
 PROFESSIONAL ELECTR. ENGR.
 O/VPPD
RONALD P. VENA
 PPU
 O/VPPD

ENDORSED BY:
O. S. DELOS REYES
 DIRECTOR
 PLANNING OFFICE

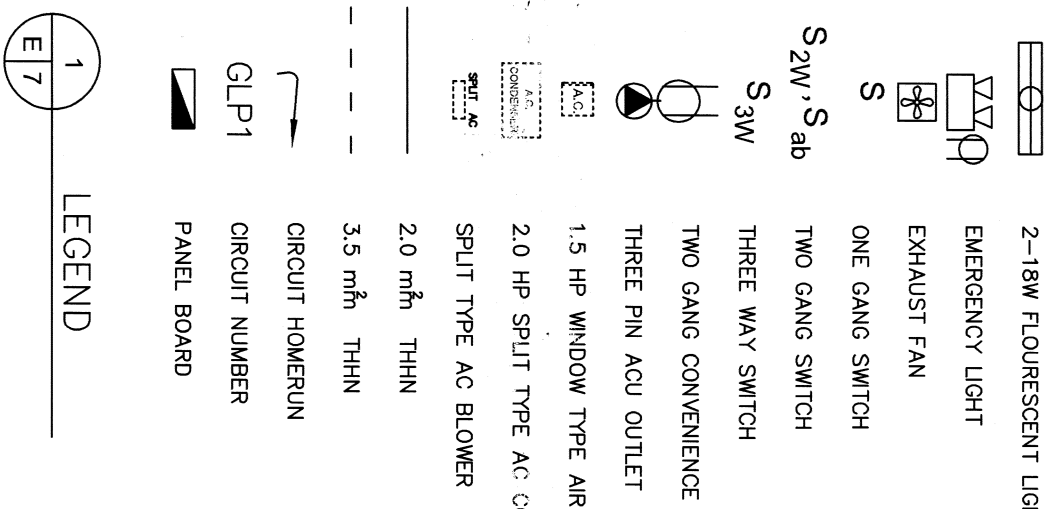
REC. APPROVAL:
M. M. ESCOBAR
 VPPD
 CVSU

APPROVED BY:
H. V. ROBLES
 PRES
 CVSU

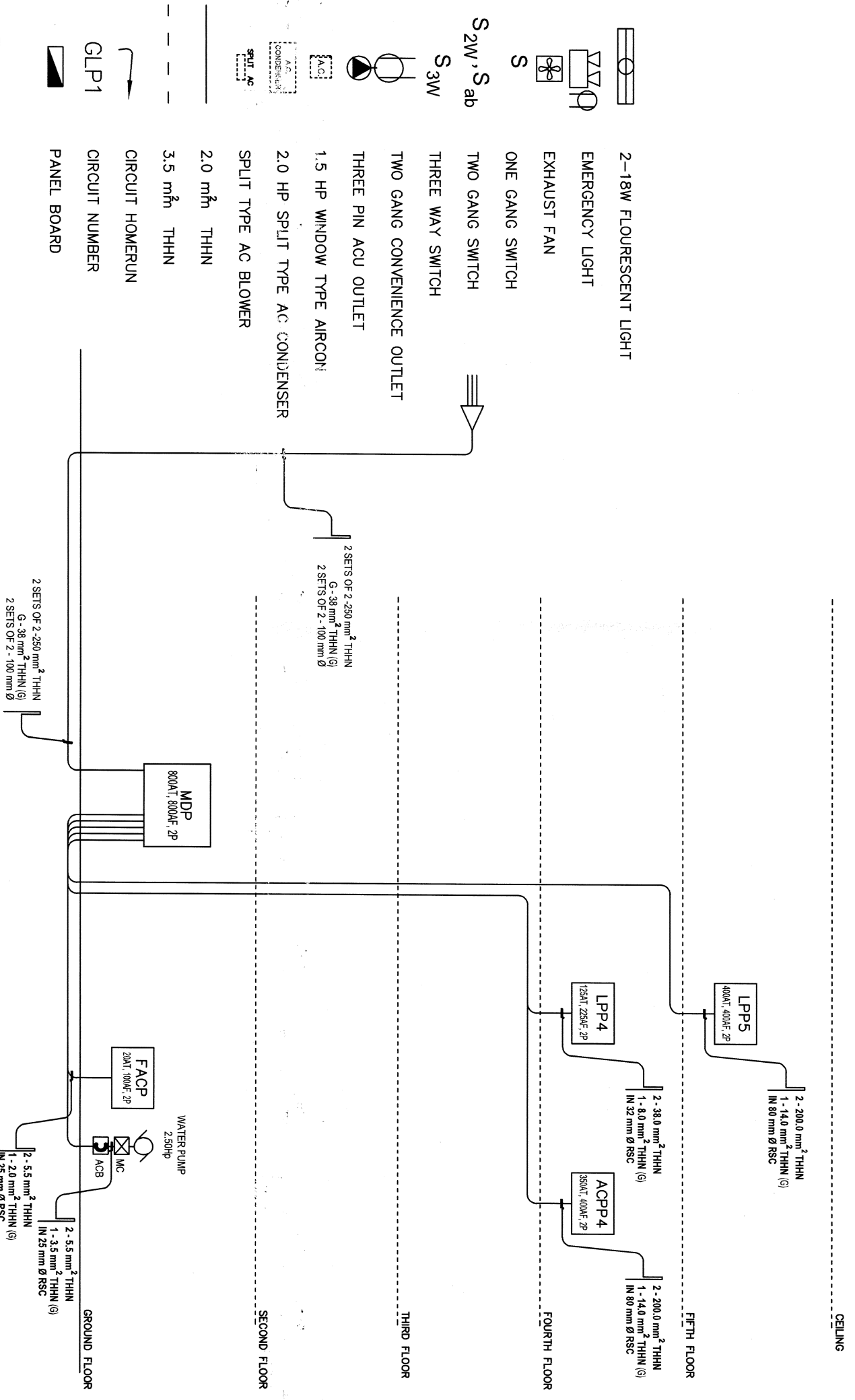
PROJECT TITLE/LOCATION:
 IMPROVEMENT OF BACCOOR CAMPUS
 BACCOOR CITY

IMPLEMENTING AGENCY:
 CAVITE STATE UNIVERSITY

END USER:
M. CALALAD
 CVSU - BACCOOR

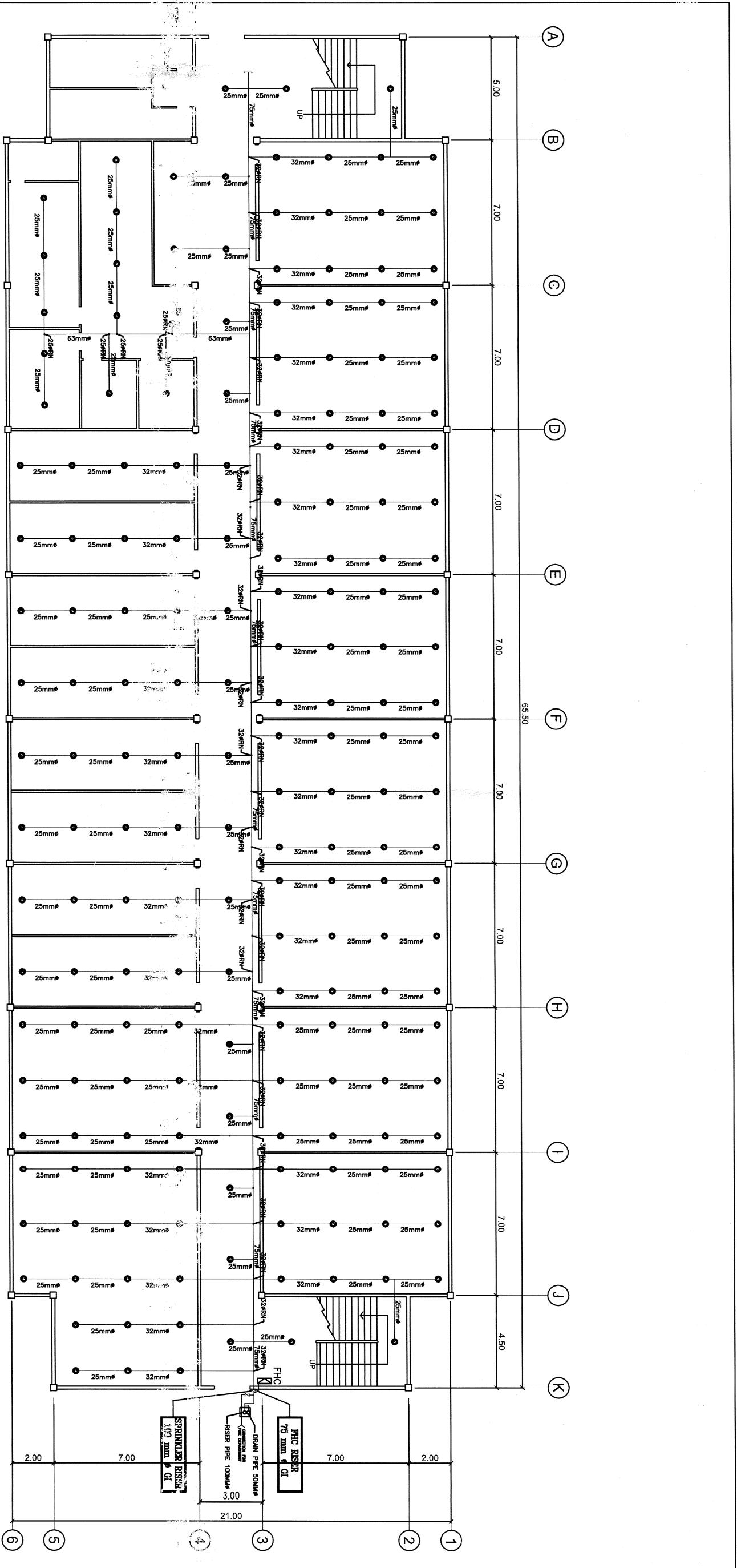


1
 E 7
 LEGEND

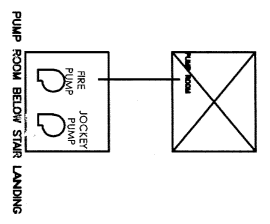


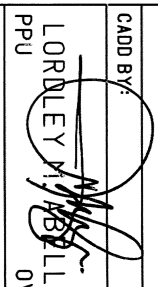
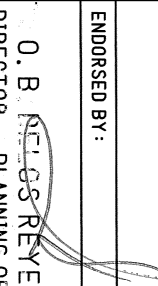
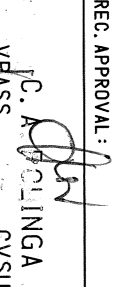
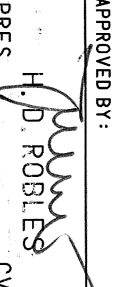

2
 E 7
 SINGLE LINE DIAGRAM

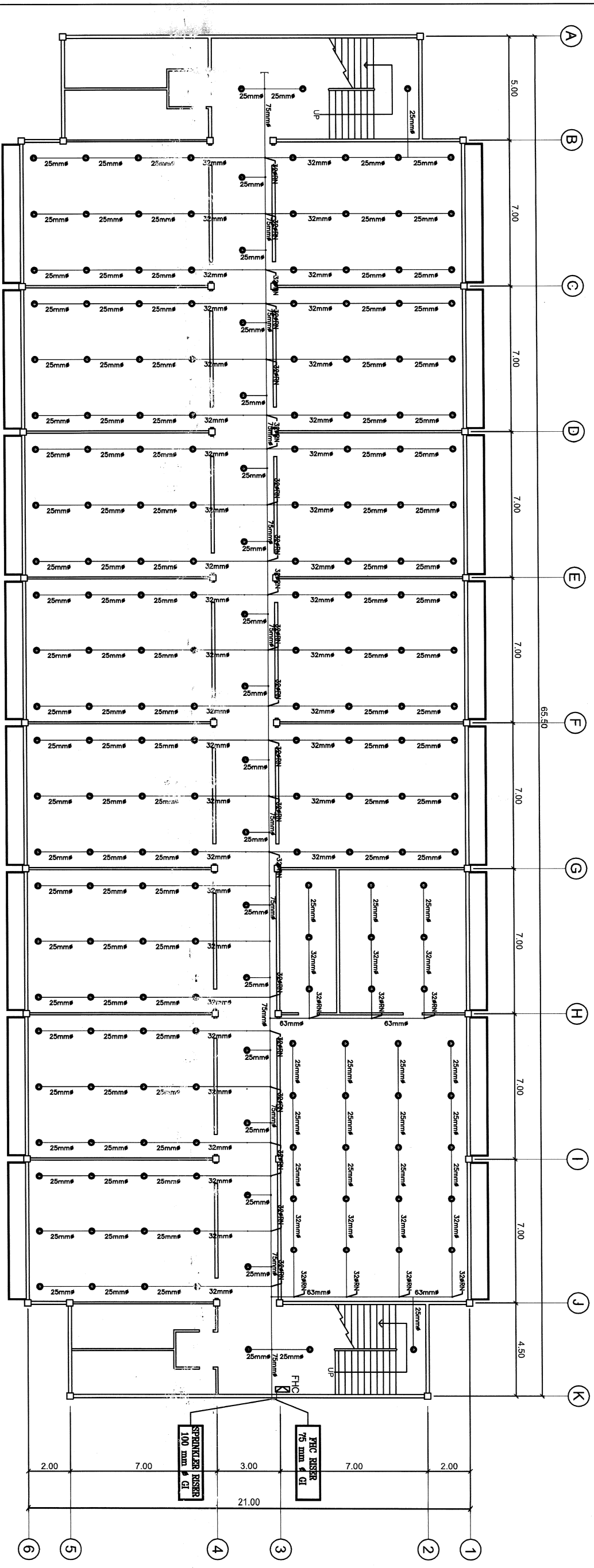
SHT NO.:
 E - 9



FP - 1 GROUND FLOOR SPRINKLER PLAN
 SCALE: 1:200 MTS.



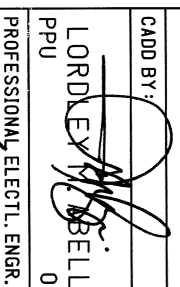
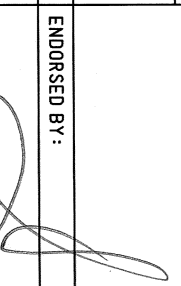
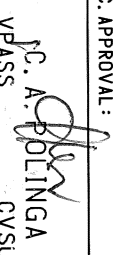
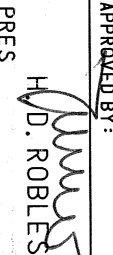

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END USER:  RONALD M. ALCALA PPU OVPDP	PROJECT TITLE / LOCATION: IMPROVEMENT OF BACCOOR CAMPUS BACCOOR CITY		
DEAN M. M. ALCALAD CVSU-BACCOOR	IMPLEMENTING AGENCY CAVITE STATE UNIVERSITY		SHIT NO.: FP - 1

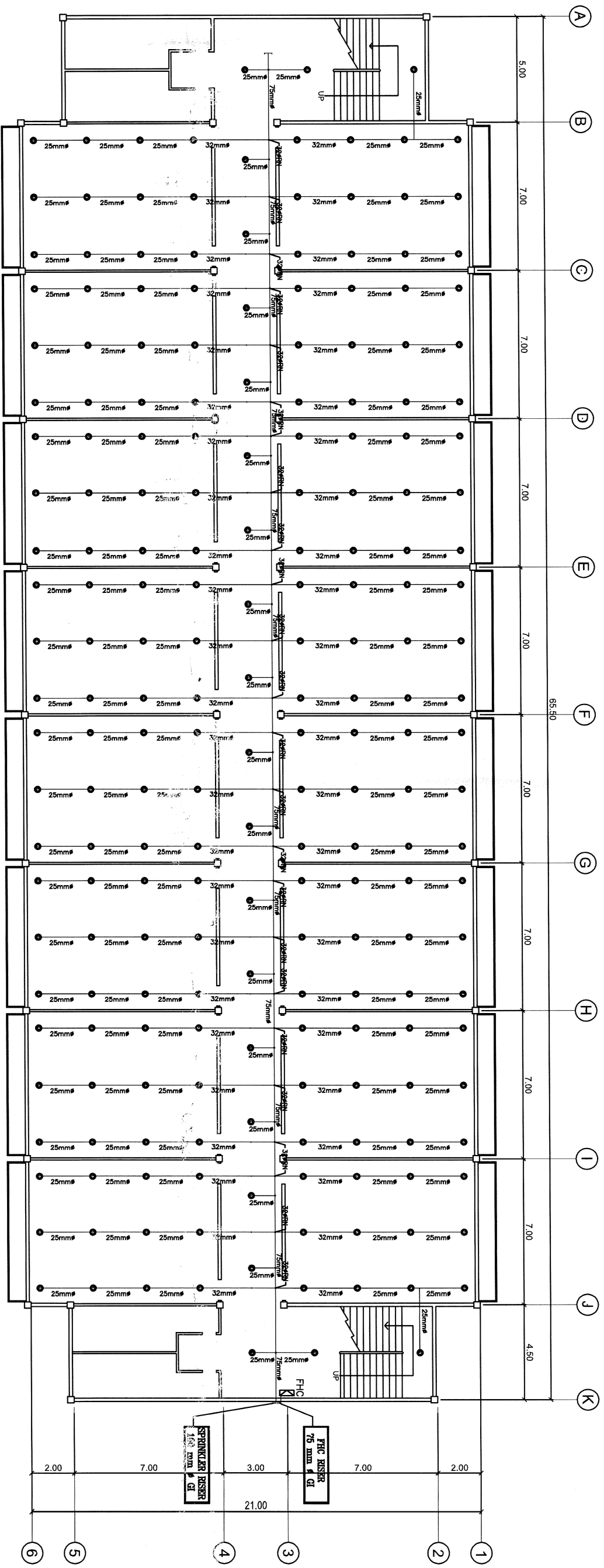


FP 3

 THIRD FLOOR SPRINKLER PLAN

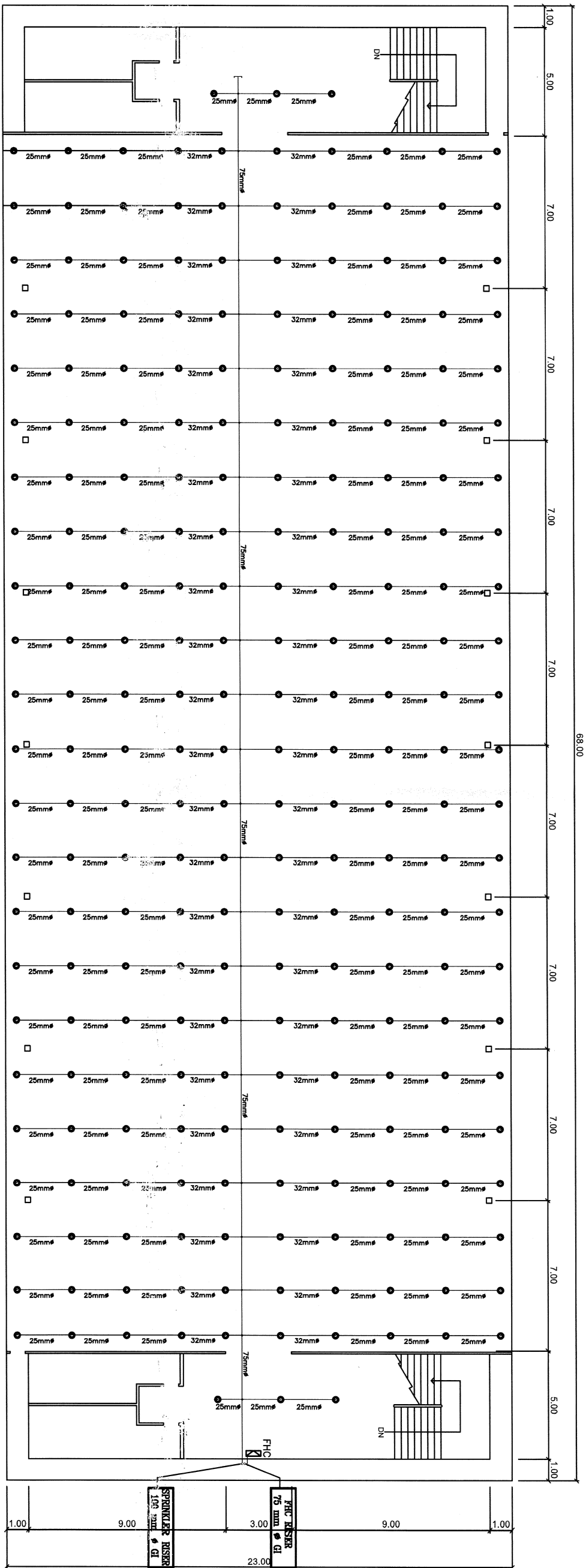
 SCALE: 1:200 MTS.

CADDED BY:  LORDE EX BELLAR PPU OVPPO PROFESSIONAL ELECTL. ENGR.	ENDORSED BY:  O. B. DELOS REYES DIRECTOR PLANNING OFFICE CVSU-BACODOR	REC. APPROVAL:  M. A. POLINGA VPASS CVSU	APPROVED BY:  H. D. ROBLES PRES CVSU
END USER:  RONALD M. ENDS OVPPO	PROJECT TITLE/ LOCATION: IMPROVEMENT OF BACODOR CAMPUS BACODOR CITY	IMPLEMENTING AGENCY: CAVITE STATE UNIVERSITY	SHIT NO.: FP - 3



FP 4
 FOURTH FLOOR SPRINKLER PLAN
 SCALE: 1:200 MTS.

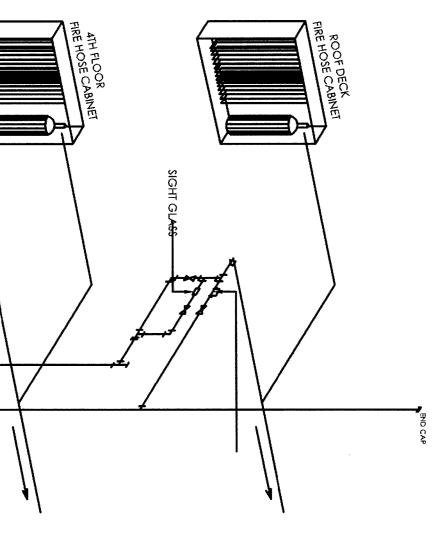
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PROJECT TITLE / LOCATION: IMPROVEMENT OF BACCOOR CAMPUS BACCOOR CITY		IMPLEMENTING AGENCY: CAVITE STATE UNIVERSITY	
DEAN M. MACALALAD CVSU-BACCOOR		SHIT NO.: FP - 4	



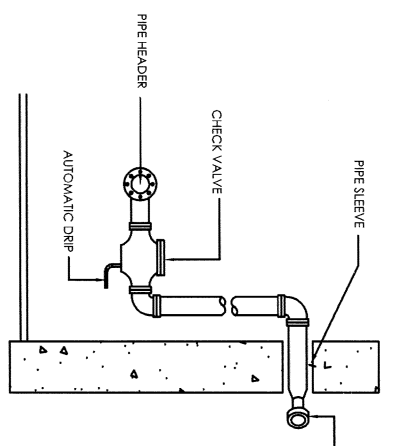
FP 5
 SCALE: 1:200 MTS.

ROOF DECK SPRINKLER PLAN

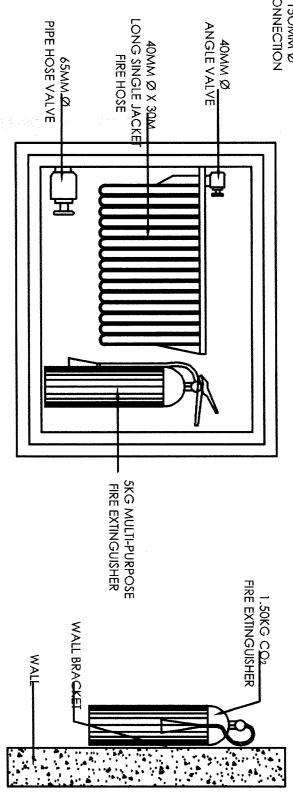
CAD BY: LORDLEY M. BELLAR PPU OVPDP PROFESSIONAL ELECTR. ENGR.	ENDORSED BY: <i>[Signature]</i> O. P. DELOS REYES DIRECTOR PLANNING OFFICE	REC. APPROVAL: <i>[Signature]</i> M. M. ESCOBAR VPPD CVSU	APPROVED BY: <i>[Signature]</i> H. D. ROBLES PRES CVSU
END USER: RONALDO PEREZ DVPPD	PROJECT TITLE / LOCATION: IMPROVEMENT OF BACCOOR CAMPUS BACCOOR CITY		
DEAN M. MACALALAD CVSU-BACCOOR	IMPLEMENTING AGENCY: CAVITE STATE UNIVERSITY		SHT NO.: FP - 5



FIRE HOSE CABINET RISER DIAGRAM

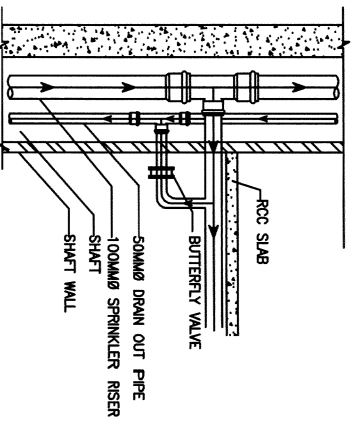


DRY STAND PIPE DETAIL

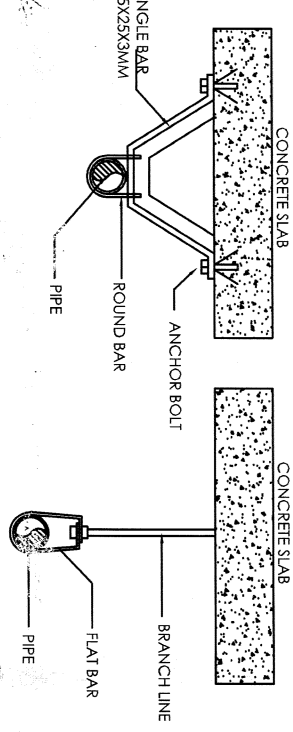


FIRE HOSE CABINET DETAIL

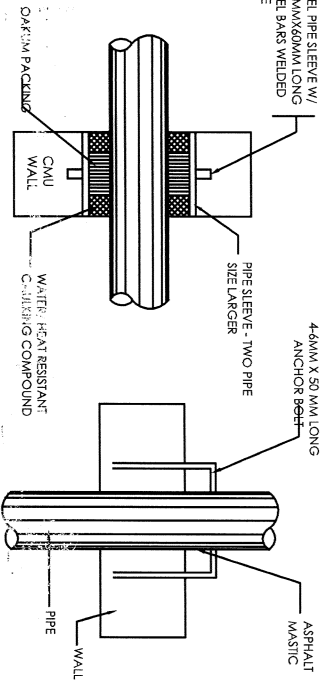
WALL MOUNTED FIRE EXTINGUISHER DETAIL



DRAIN OUT PIPE SECTION

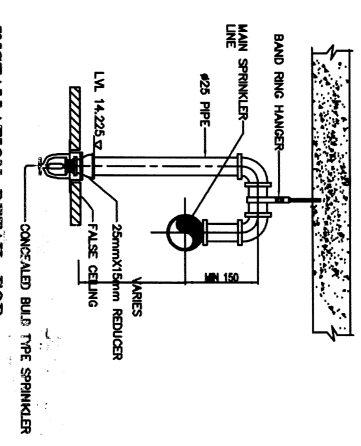


TWO-WAY BRACE/ PIPE HANGER

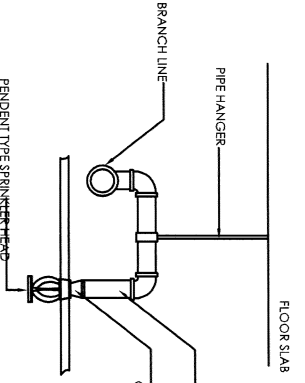


PIPE SLEEVE

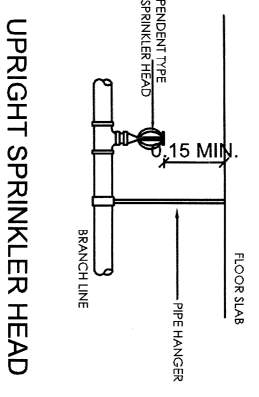
FOUR WAY BRACE



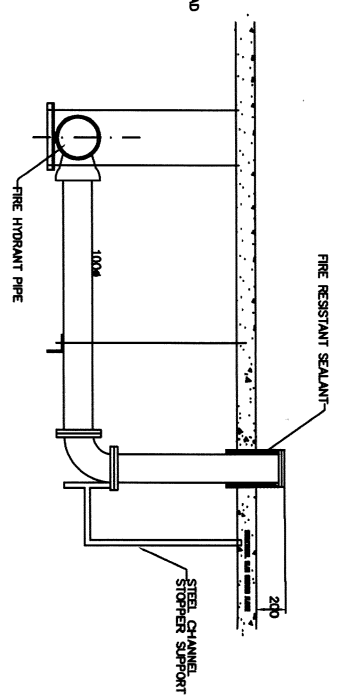
INSTALLATION DETAIL FOR PENDENT SPRINKLER (CONCEALED)



PENDENT SPRINKLER HEAD



UPRIGHT SPRINKLER HEAD



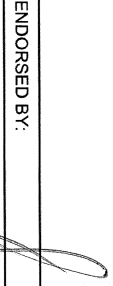
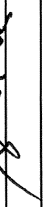
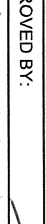
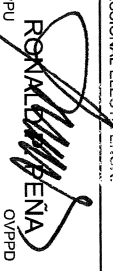

FIRE HYDRANT

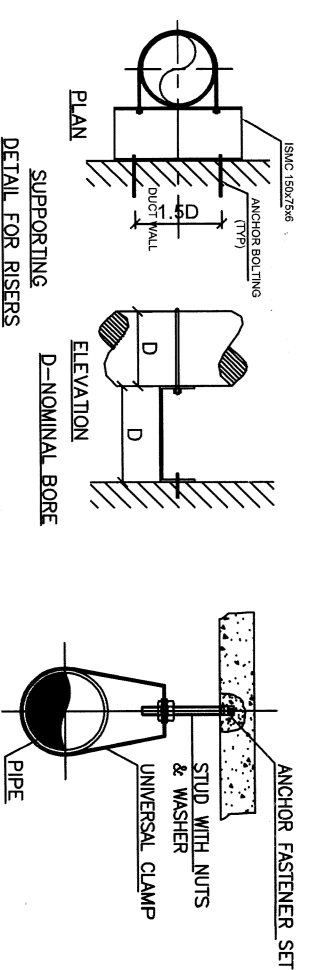
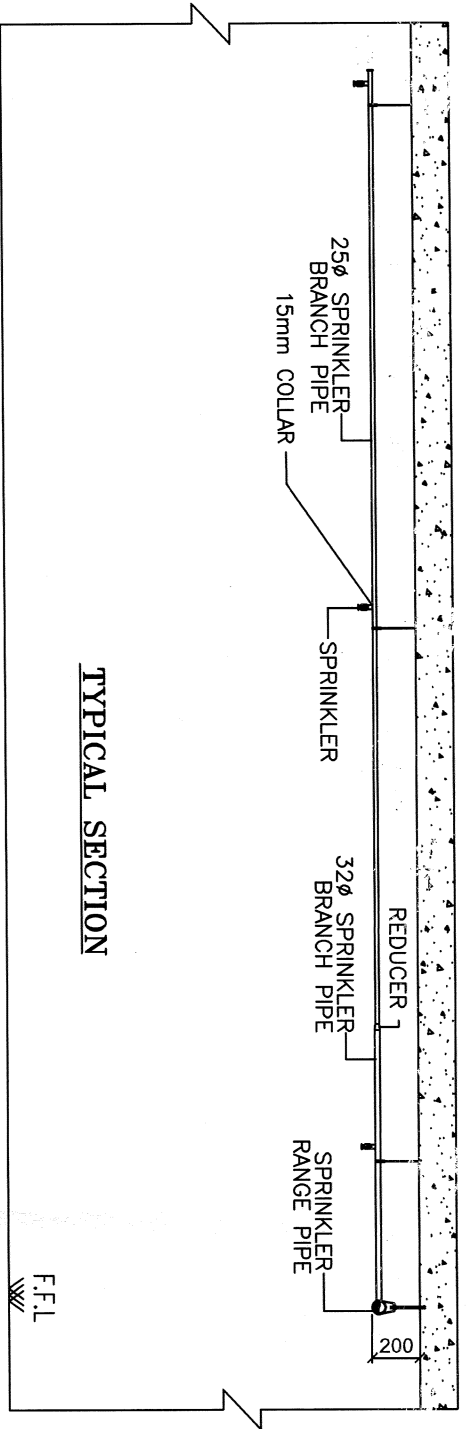
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FP 6

FIRE PROTECTION DETAILS

NTS.

SCALE

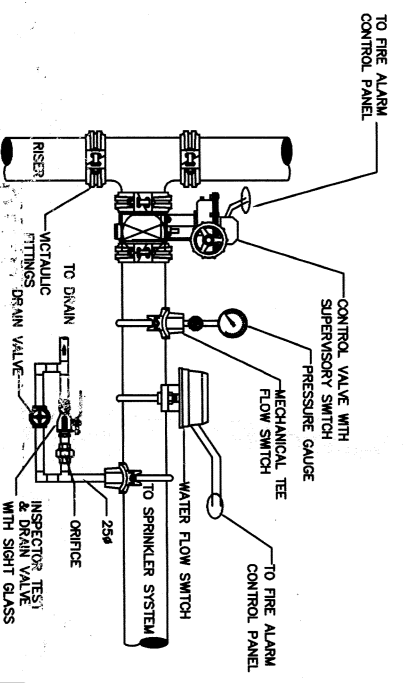
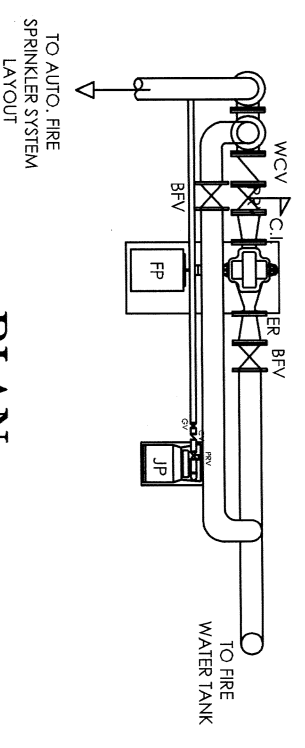
CADD BY: LORDLEY BELLAR PPU PROFESSIONAL ELECT. ENGR. OVP/PPD	ENDORSED BY:  O. B. DELOS DIRECTOR PLANNING OFFICE CVSU - BACCOOR	REC. APPROVAL:  M. M. ESCOBAR VPPD CVSU	APPROVED BY:  H. D. ROBLES PRES CVSU	PROJECT TITLE/LOCATION: IMPROVEMENT OF BACCOOR CAMPUS CVSU - BACCOOR CAMPUS BACCOOR CITY	IMPLEMENTING AGENCY: CAVITTE STATE UNIVERSITY	SHIT NO.: FP - 6
END USER:  ROMALENA OVP/PPD	DEAN:  M. MACALALAD CVSU - BACCOOR	M. M. ESCOBAR VPPD CVSU	H. D. ROBLES PRES CVSU	CVSU - BACCOOR CAMPUS BACCOOR CITY	CAVITTE STATE UNIVERSITY	FP - 6



PIPE SIZE	DIA. OF ROD	PIPE SIZE	DISTANCE BETWEEN HANGERS
25 MMØ	10 MM.	25 MMØ	3.0 M.
32 MMØ	10 MM.	32 MMØ	3.0 M.
40 MMØ	10 MM.	40 MMØ	3.0 M.
50 MMØ	10 MM.	50 MMØ	3.0 M.
65 MMØ	10 MM.	65 MMØ	3.0 M.
80 MMØ	10 MM.	80 MMØ	3.0 M.
100 MMØ	10 MM.	100 MMØ	4.0 M.
150 MMØ	12.7 MM.	150 MMØ	4.0 M.

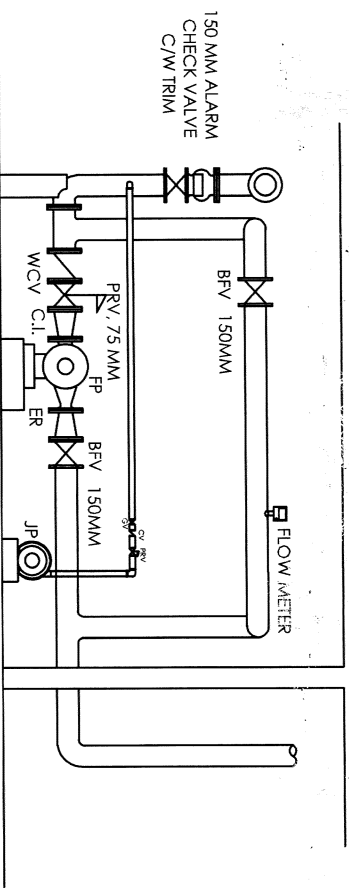
TYP. PIPE SUPPORT DETAILS

PLAN

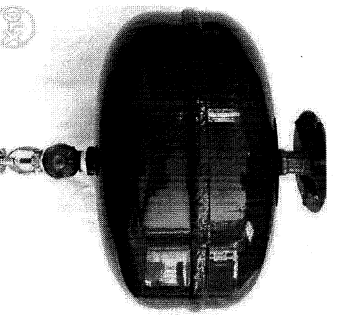


ZONE CONTROL VALVE

DESIGNATION	QTY.	CAPACITY (GPM)	TYPE	RPM	WORKING PRESSURE	KW/(HP) EFF.	VOLTS	PHASE	HERTZ	REMARKS
FIRE PUMP	1	500	HORIZONTAL SPLIT CASE	3650	120 PSI.	49 (60HP)	65 %	220	3	ELECTRIC DRIVEN FIRE PUMP
JOCKEY PUMP	1	20	HORIZONTAL MULTI STAGE	3600	125 PSI.	9.73 (6 HP)	65 %	220	3	ELECTRIC DRIVEN JOCKEY PUMP



ELEVATION



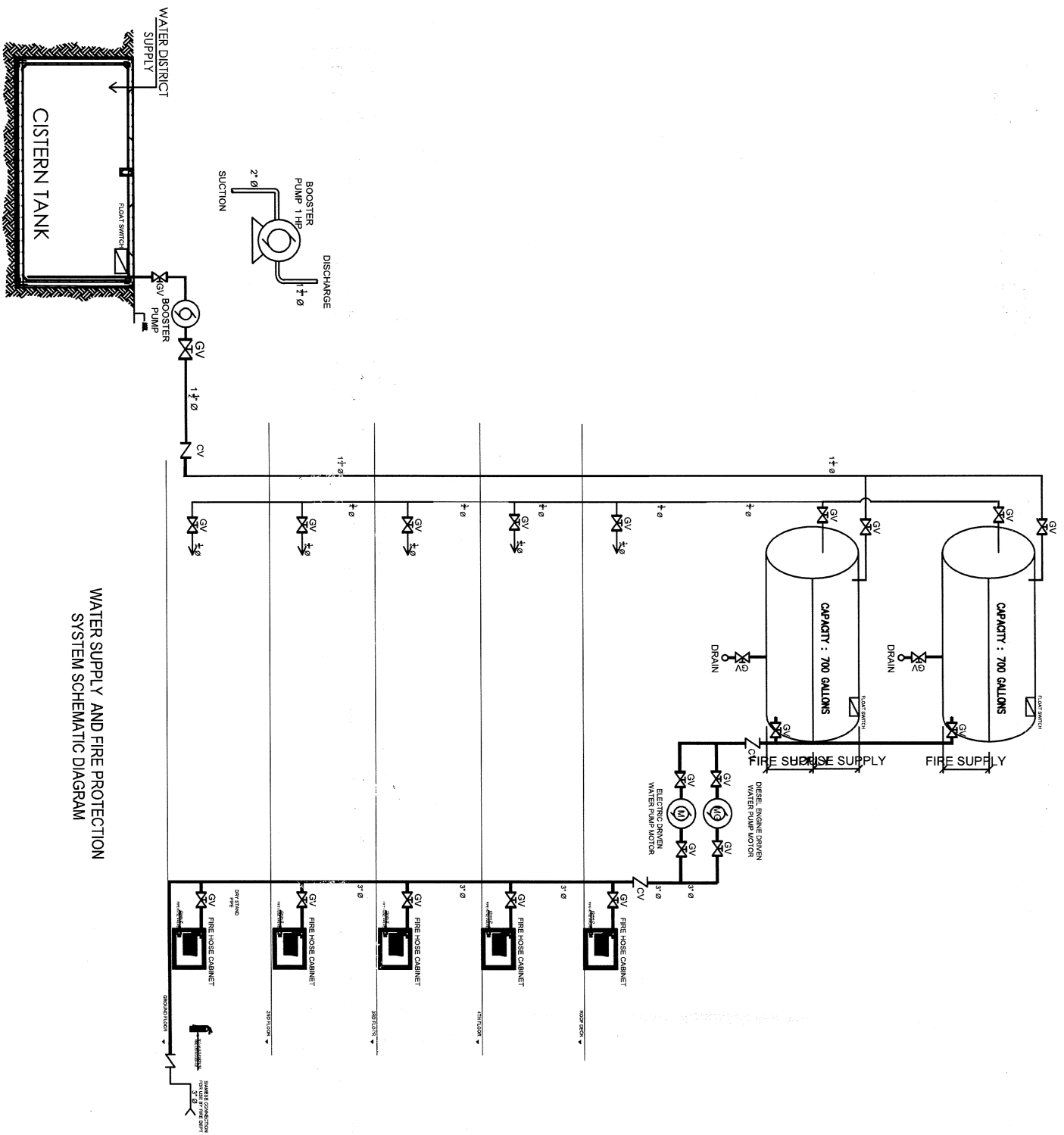
Ceiling Type HCFC 123 Automatic Fire Extinguisher

- NOTES:
- ALL PIPES SHALL HAVE A STRENGTH EQUIVALENT TO SCHEDULE 40
 - ALL PIPES SHALL BE PAINTED WITH EPOXY PRIMER PAINT AND WITH A RED PAINT AS FINAL COATING.
 - ALL CONNECTIONS SHALL BE LEAK PROOF AND SHALL BE ABLE TO RESIST HIGH PRESSURE.
 - USE PENDENT TYPE SPRINKLER HEADS FOR PORTIONS WITH CEILINGS.
 - USE SIDE WALL TYPE SPRINKLER HEADS IN STAIRCASES.
 - SPRINKLER SYSTEM WILL BE TAPPED TO EXISTING RISER AND DRAIN PIPES

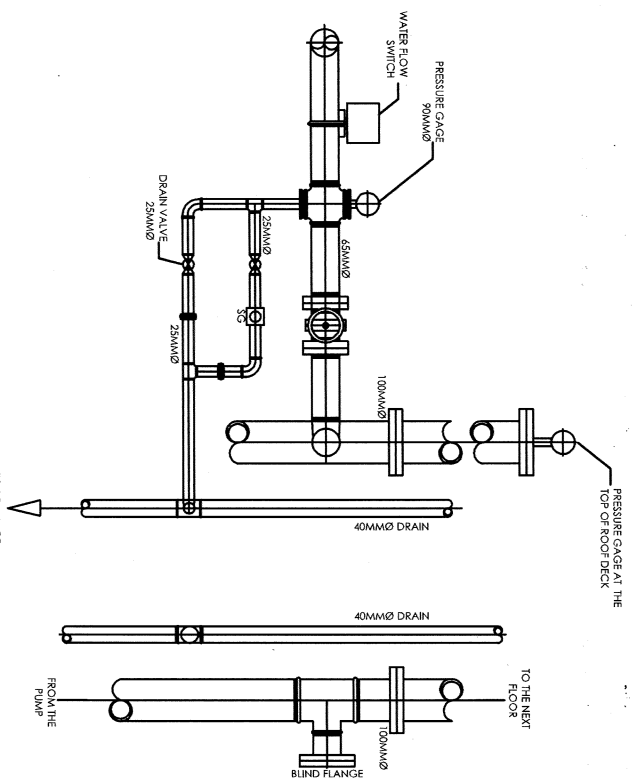
FIRE/JOCKEY PUMP PIPING LAYOUT SCALE N.T.S

FIRE PROTECTION DETAILS SCALE N.T.S

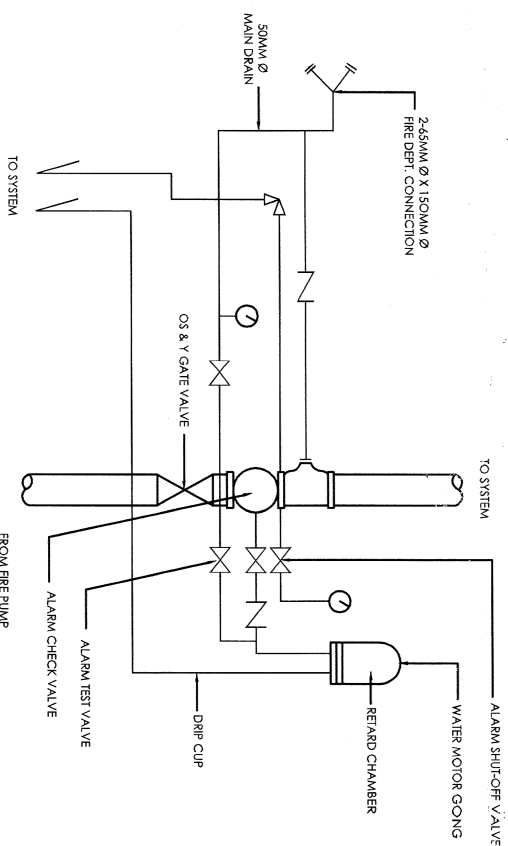
CADD BY: LORDLEY M. ABELLAR PPU PROFESSIONAL ELECTR. ENGR. OV/PPD	ENDORSED BY: O. B. DELOS REYES DIRECTOR PLANNING OFFICE CVSU - BACCOOR	REC. APPROVAL: C. A. PILINGA VPASS CVSU	APPROVED BY: H.D. ROBLES PRES CVSU	PROJECT TITLE/LOCATION: IMPROVEMENT OF BACCOOR CAMPUS BACCOOR CITY	IMPLEMENTING AGENCY: CAVITE STATE UNIVERSITY	SHT NO.: FP - 7
END USER: PPU RONALD P. PENIA OV/PPD						
DEAN M. SACALALAD CVSU - BACCOOR						



WATER SUPPLY AND FIRE PROTECTION SYSTEM SCHEMATIC DIAGRAM



2 SUPERVISORY FLOOR CONTROL VALVE ASSEMBLY
SCALE: M-17
ELEVATION VIEW AT RISER



ALARM CHECK VALVE SCHEMATIC DIAGRAM

1 FIRE PROTECTION DETAILS
SCALE: FP 8
NTS.

CADD BY: LORDLEY M. ABALLAR PPU PROFESSIONAL ELECTL. ENGR.		ENDORSED BY:		REC. APPROVAL:		APPROVED BY:		PROJECT TITLE/LOCATION:		IMPLEMENTING AGENCY:		SHT NO.:	
END USER: M. MACALALAD CVSU - BACCOOR		O. B. DELOS REYES DIRECTOR PLANNING OFFICE		M. M. ESCOBAR VPPD CVSU		C. A. POLINGA VPASS CVSU		H. D. ROBLES PRES CVSU		IMPROVEMENT OF BACCOOR CAMPUS BACCOOR CITY		CAVITE STATE UNIVERSITY FP - 8	
PROFESSIONAL ELECTL. ENGR. ROMALD P. PINENA O/PPD													

GENERAL NOTES :

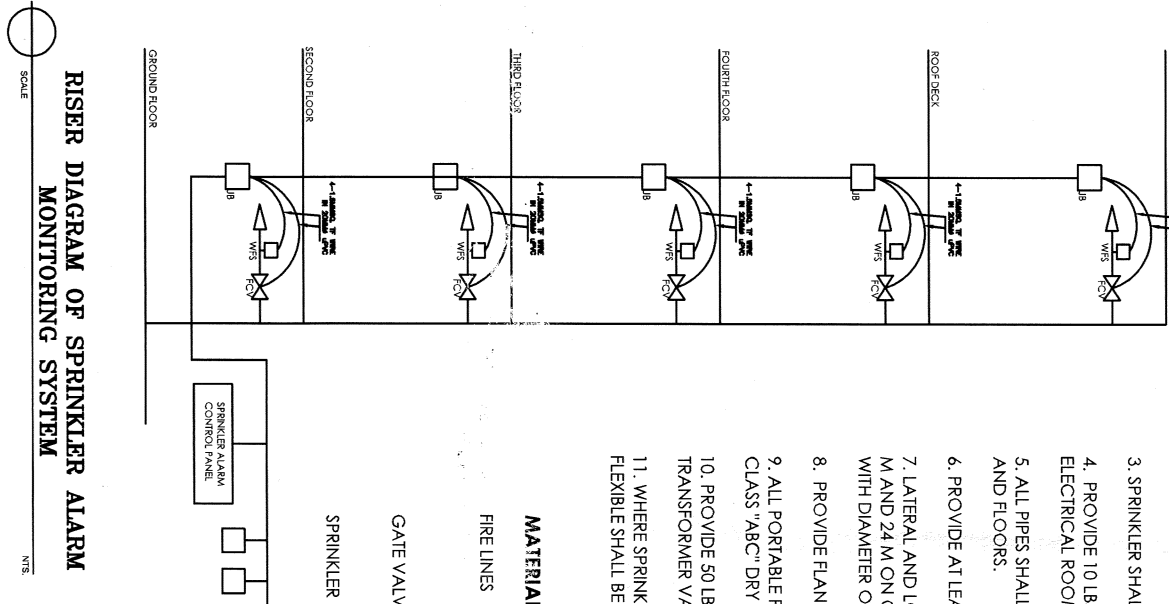
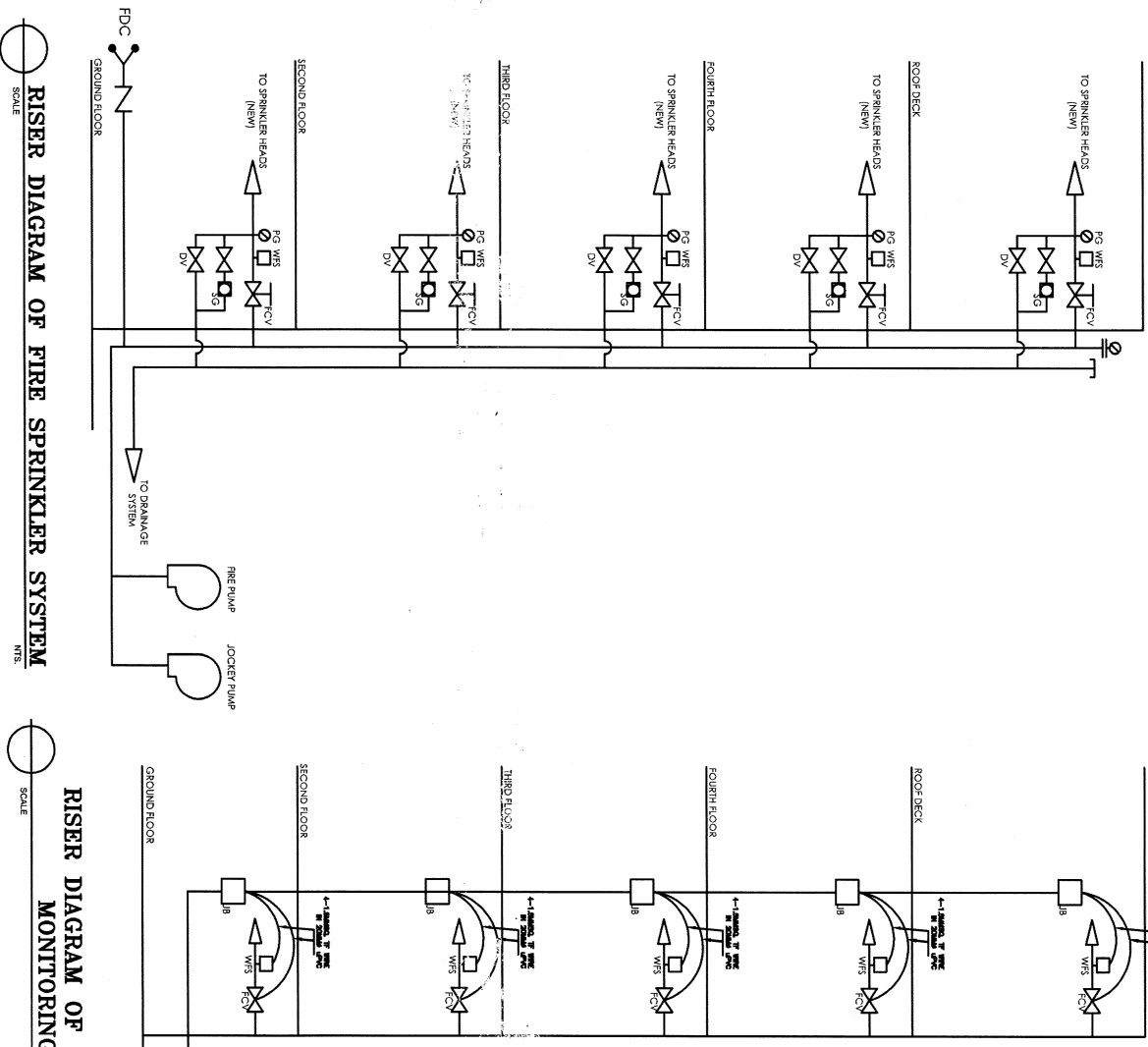
1. INSTALLATION OF FIRE SPRINKLER SYSTEM SHALL CONFORM TO NFPA-13 REQUIREMENTS.
2. COORDINATE WITH OTHER WORKS, INCLUDING THE PLUMBING PIPING AS NECESSARY TO INTERFACE COMPONENTS OF FIRE PROTECTION PIPING PROPERLY WITH OTHER WORKS
3. SPRINKLER SHALL BE SPACED NOT LESS THAN 6 FT (1.8 M) ON CENTERS.
4. PROVIDE 10 LBS HALOTRON PORTABLE FIRE EXTINGUISHERS TO ALL ELECTRICAL ROOM AND TO OTHER ROOM OF THE SAME USAGE.
5. ALL PIPES SHALL BE PROVIDED WITH THE PIPE SLEEVE THROUGH BEAMS, WALL AND FLOORS.
6. PROVIDE AT LEAST ONE (1) HANGER BETWEEN EACH TWO (2) BRANCH LINES.
7. LATERAL AND LONGITUDINAL SWAY BRACES SPACED AT MAXIMUM OF 12.2 M AND 24 M ON CENTER RESPECTIVELY SHALL BE PROVIDED AT ALL PIPE LINES WITH DIAMETER OF 150 MM AND LARGER.
8. PROVIDE FLANGE CONNECTO AT MAXIMUM INTERVAL OF 12 METERS.
9. ALL PORTABLE FIRE EXTINGUISHERS INSIDE FIRE HOSE CABINET (FHC) SHALL BE CLASS "ABC" DRY CHEMICAL UNLESS OTHERWISE SPECIFIED.
10. PROVIDE 50 LBS WHEELED TYPE HALOTRON PORTABLE FIRE EXTINGUISHER IN TRANSFORMER VAULTS.
11. WHERE SPRINKLER PASSES THROUGH SEISMIC SEPARATION ASSEMBLIES, FLEXIBLE SHALL BE PROVIDED.
12. PROVIDE AUXILIARY DRAIN FOR TRAPPED SECTION AS REQUIRED BY NFPA-13.
13. THE DISTANCE BETWEEN THE HANGER AND CENTER OF LINE OF AN UPRIGHT SPRINKLER HEAD SHALL NOT BE LESS THAN 76 MM.
14. PROVIDE NECESSARY EARTHQUAKE PROTECTION AS REQUIRED UNDER NFPA-13 AND APPLICABLE BUILDING CODE.
15. PIPING SHALL BE CONCEALED IN AREAS WITH DROP CEILINGS.
16. INSTALL IRON PIPE SLEEVES OF AMPLE DIAMETER AT ALL POINTS WHERE PIPES PENETRATE BEAMS, FLOOR OR WALLS. SIZE AND INSTALL SO THAT THE PIPES ARE NOT STRESSED.
17. SLEEVES SHALL BE INSTALLED PRIOR TO CONSTRUCTION OF WALLS OR POURING OF CONCRETE. INSTALL SLEEVES FLUSH WITH ALL SURFACES.
18. THE CONTRACTOR MUST SUBMIT SHOP DRAWING INDICATING ACTUAL DIMENSIONAL SIZES, OPERATING WEIGHTS, AND SUFFICIENT CLEARANCES TO FACILITATE NORMAL SERVICE AND MAINTENANCE. HOWEVER, SHOULD ACTUAL EQUIPMENT PHYSICALLY DIFFER FROM THOSE SHOWN ON THE PLANS, THE CONTRACTOR SHOULD NOTIFY THE ARCHITECT IN WRITING.
19. ALL MECHANICAL WORKS SHALL BE DONE IN ACCORDANCE WITH THE RULES AND REGULATION OF THE LATEST EDITION OF THE PHILIPPINE MECHANICAL CODE.
20. ALL MECHANICAL WORKS SHALL BE DONE UNDER THE DIRECT AND IMMEDIATE SUPERVISOR OF A DULY LICENSED REGISTERED MECHANICAL ENGINEER.

MATERIAL SPECIFICATIONS :

- FIRE LINES** - SHALL BE BLACK IRON (BI) PIPES, SCHEDULE 40 CONFORMING TO ASTM A53, FACIFIC PIPES OR APPROVED BRAND.
- GATE VALVES** - SHALL BE OUTSIDE SCREW AND YOKE (OSY), CHECK AND GLOBE VALVES TO ASTM B-62.
- SPRINKLER HEADS** - ALL SPRINKLER HEADS (CONCEALED, UPRIGHT & SIDEWALL) SHALL BE RATED 74° C (165° F), EXCEPT ON KITCHEN SHALL BE 100° C (212° F).

NOTES:

- ALL PIPES SHALL HAVE A STRENGTH EQUIVALENT TO SCHEDULE 40
- ALL PIPES SHALL BE PAINTED WITH EPOXY PRIMER PAINT AND WITH A RED PAINT AS FINAL COATING.
- ALL CONNECTIONS SHALL BE LEAK PROOF AND SHALL BE ABLE TO RESIST HIGH PRESSURE.
- USE PENDENT TYPE SPRINKLER HEADS FOR PORTIONS WITH CEILINGS.
- USE SIDE WALL TYPE SPRINKLER HEADS IN STAIRCASES.
- SPRINKLER SYSTEM WILL BE TAPPED TO EXISTING RISER AND DRAIN PIPES



LEGEND & ABBREV. :

	GATE VALVE		PIPING SYSTEM
	CHECK VALVE		PRESSURE RELIEF VALVE
	WATER FLOW SWITCH		PENDENT/UPRIGHT SPRINKLER
	TEE CONNECTION		FIRE EXTINGUISHER
	ELBOW CONNECTION		SMOKE DETECTOR
	OS & Y GATE VALVE WITH MONITOR SWITCH		EAGLE HCC-123 (Infrared) Ceiling Type Fire Extinguisher.
	END CAP		Standard Pressure Type
	C.I. CONCENTRIC INCREASER		PRV PRESSURE REDUCING VALVE
	ER ECCENTRIC REDUCER		FP FIRE PUMP
	RN RISER NIPPLE		JP JOCKEY PUMP
	BFV BUTTERFLY VALVE		FA FIRE ALARM
	BV WAFAER TYPE		B BELL
	GV GATE VALVE, RING STEM		
	WCV WAFAER TYPE CHECK VALVE		
	CV SPRING TYPE CHECK VALVE		

FIRE PROTECTION DETAILS

FP 9 SCALE

CADD BY:

 LORDLEY M. BELLAR
 PPU
 OVP/PPD
 PROFESSIONAL ELECT. ENGR.

ENDORSED BY:

 RONALD D. ARANA
 PPU
 OVP/PPD

REC. APPROVAL:

 C. A. POLINGA
 W/PASS
 CVSU

APPROVED BY:

 H. D. ROBLES
 CVSU

PROJECT TITLE/LOCATION:
 IMPROVEMENT OF BACCOOR CAMPUS
 BACCOOR CITY

IMPLEMENTING AGENCY:
 CAVITE STATE UNIVERSITY

SHT NO.:
 FP - 9

END USER:

 M. MACALALAD
 PPU
 CVSU - BACCOOR

DIRECTOR:
 O. B. DELOS REYES
 PLANNING OFFICE

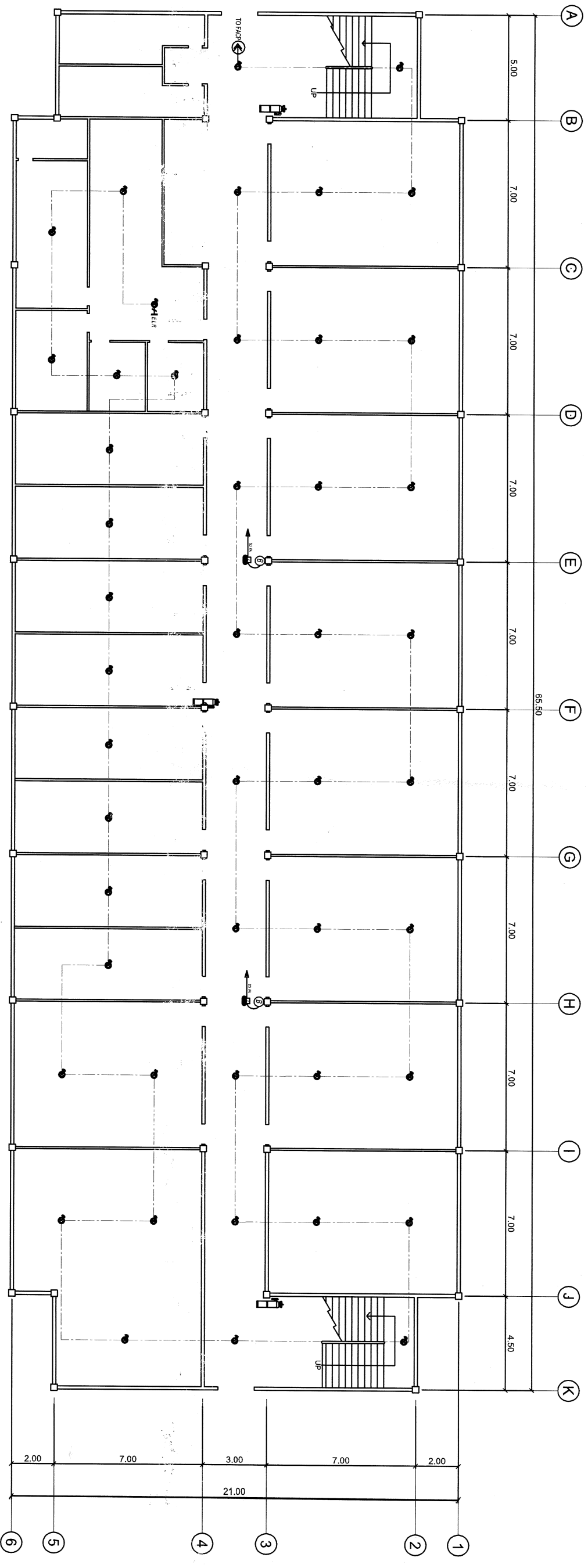
M. M. ESCOBAR
 V/PPD
 CVSU

C. A. POLINGA
 W/PASS
 CVSU

H. D. ROBLES
 CVSU

IMPROVEMENT OF BACCOOR CAMPUS
 BACCOOR CITY

SHT NO.:
 FP - 9



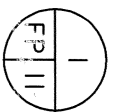
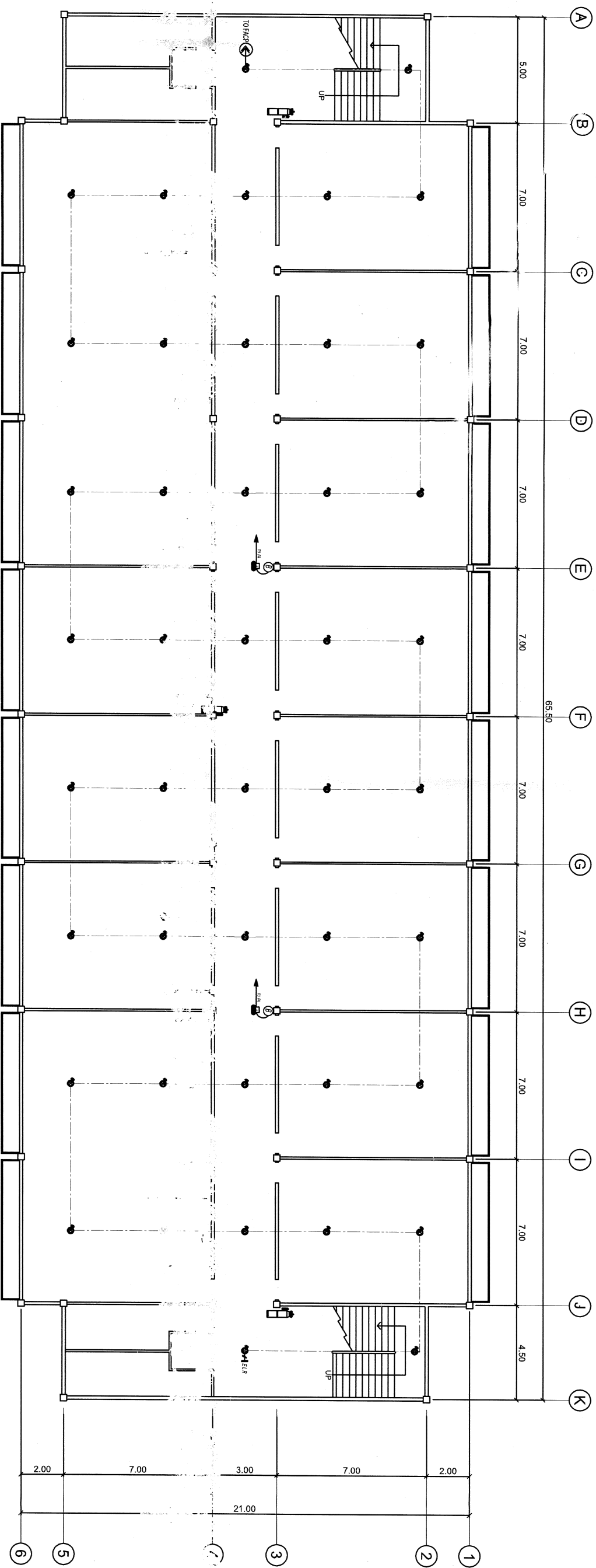
GROUND FLOOR FDAS PLAN

1
FP 10

SCALE:

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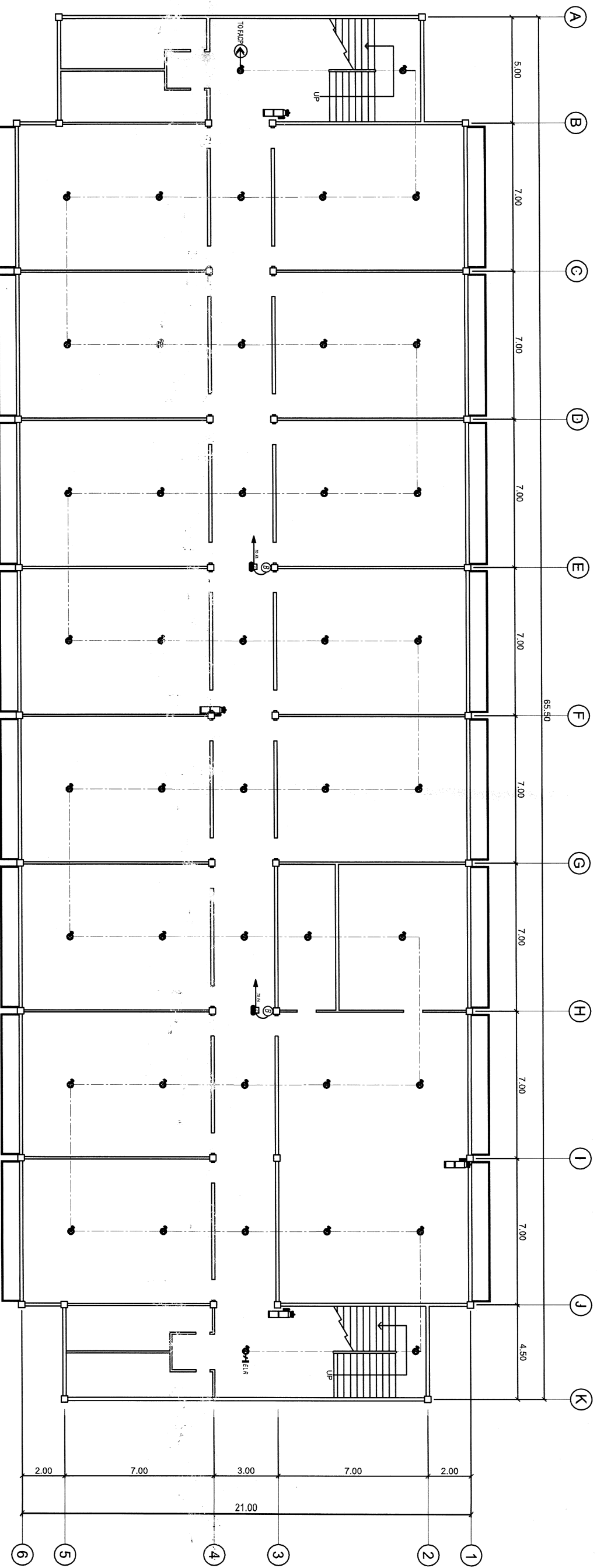
CADD BY: LORDLEY M. ABELLAR PPU PROFESSIONAL ELECTL. ENGR. <i>RONALDO MENA</i> PPU OVPDP		ENDORSED BY: <i>[Signature]</i> O. B. DELOS REYES DIRECTOR PLANNING OFFICE		REC. APPROVAL: <i>[Signature]</i> M. M. ESCOBAR VPPD CVSU		APPROVED BY: <i>[Signature]</i> H. D. ROBLES PRES CVSU		PROJECT TITLE / LOCATION: IMPROVEMENT OF BACCOOR CAMPUS CVSU - BACCOOR CAMPUS BACCOOR CITY		IMPLEMENTING AGENCY: CAVITE STATE UNIVERSITY		SHIT NO.: FP-10	
END USER: M. MACALALAD DEAN CVSU-BACCOOR													



SECOND FLOOR FDAS PLAN

SCALE: 1:200 MTS.

DRAWN BY: LURILEY PPU PROFESSIONAL LEGAL ENGR. OVPDD	ENDORSED BY: U. B. [Signature] DIRECTOR PLANNING OFFICE CVSU-BACODR	REC. APPROVAL: [Signature] V. A. [Signature] V. ASS. CVSU	APPROVED BY: [Signature] D. ROBERTS PRES. CVSU	PROJECT TITLE/LOCATION: IMPROVEMENT OF BACODR CAMPUS BACODR CITY	IMPLEMENTING AGENCY: CVSU STATE UNIVERSITY	SHIT NO.:
END USER: [Signature] ROMALDO [Signature] OVPDD						
DEAN U. B. [Signature] CVSU-BACODR						



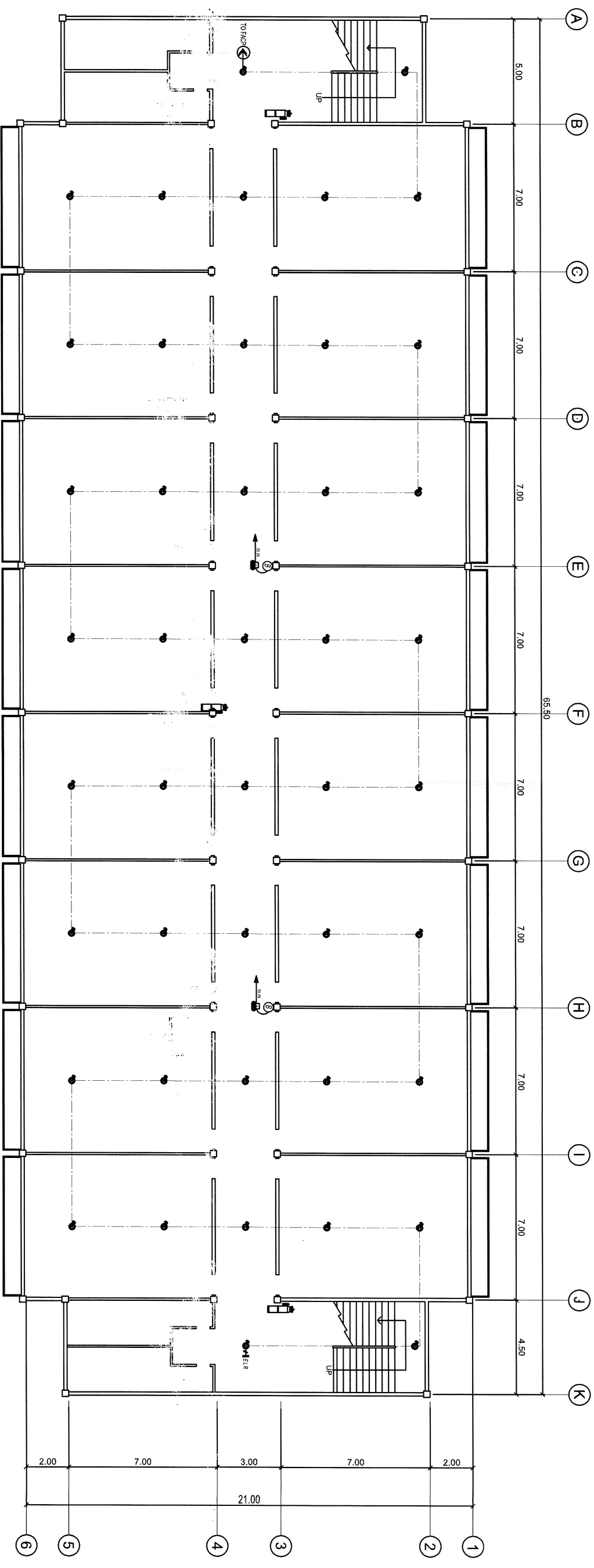
THIRD FLOOR FDAS PLAN

FP 12

SCALE:

1:200 MTS.

CADD BY: LORDLEY M. BOLLAR PPU PROFESSIONAL ELECTR. ENGR. OVPPD	ENDORSED BY: <i>[Signature]</i>	REC. APPROVAL: J.C.A. BILINGA VPASS CVSU	APPROVED BY: H.D. ROBLES PRES CVSU	PROJECT TITLE/ LOCATION: IMPROVEMENT OF BACCOOR CAMPUS BACCOOR CITY	IMPLEMENTING AGENCY CAVITE STATE UNIVERSITY	SHT NO: FP-12
END USER: ROXANA BENA OVPPD						
DEAN M. SICALALAD CVSU-BACCOOR	DIRECTOR O. B. NELLOS REYES PLANNING OFFICE	VPPD M.M. ESCOBAR CVSU				

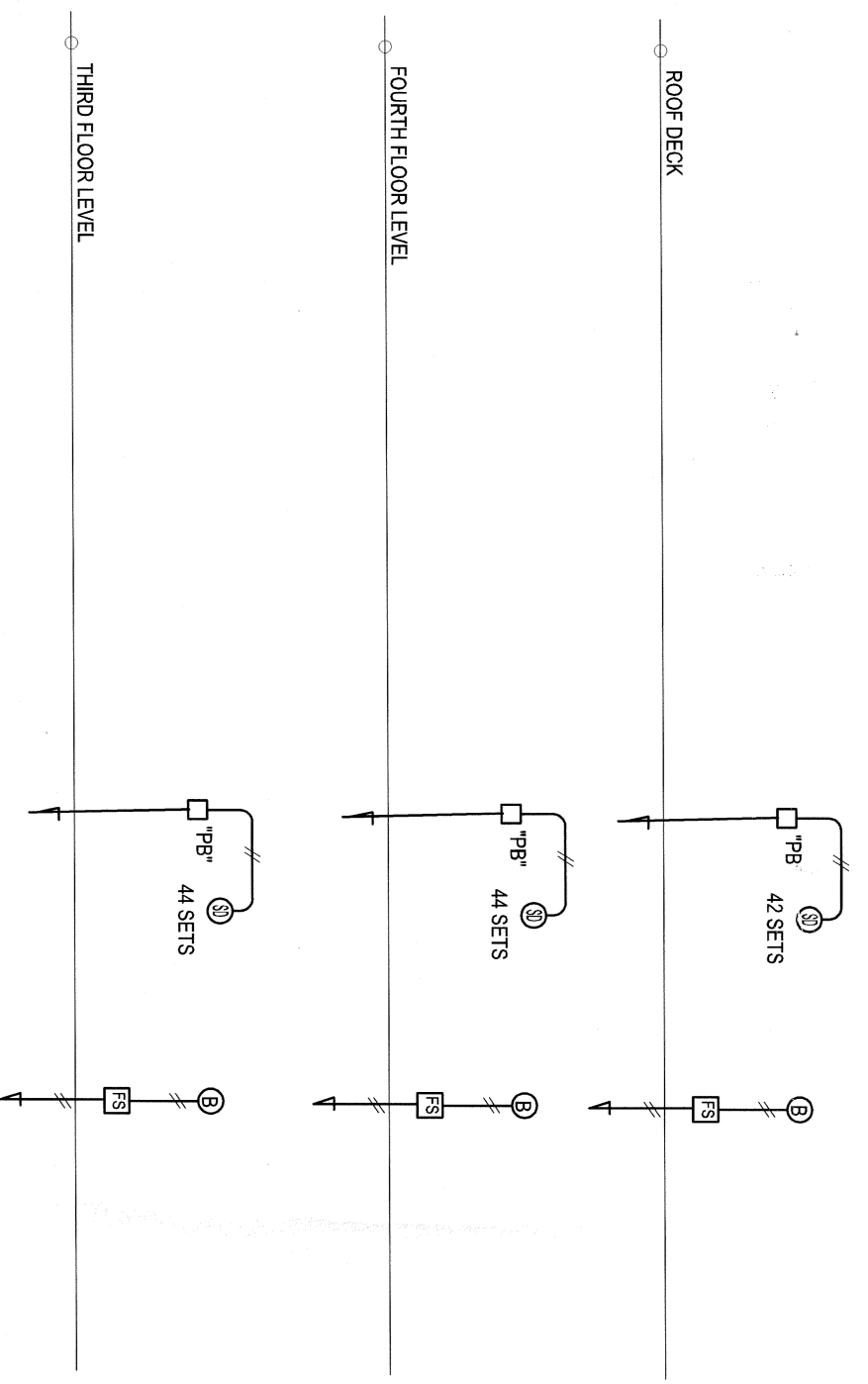


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FP 13

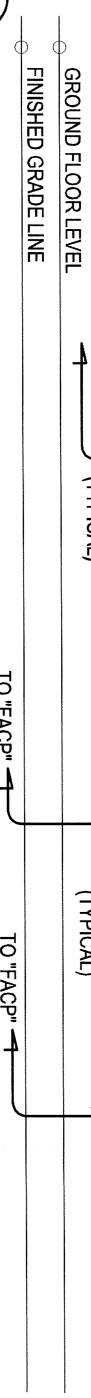
FOURTH FLOOR FDAS PLAN

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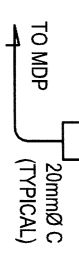
CADDED BY: LORDEY M. ABELLAR PPU OVPDD PROFESSIONAL ELECTL. ENGR.		ENDORSED BY: <i>[Signature]</i>		REC. APPROVAL: C. A. POLINGA VPASS CVSU		APPROVED BY: <i>[Signature]</i> H. D. ROBLES PRES CVSU		PROJECT TITLE / LOCATION: IMPROVEMENT OF BACCOOR CAMPUS BACCOOR CITY		IMPLEMENTING AGENCY CAVITE STATE UNIVERSITY		SHT NO.: FP-13	
END USER: RONALD B. BARRERA PPU OVPDD		DEAN: M. MACALALAD CVSU-BACCOOR		DIRECTOR: O. B. DELOS REYES PLANNING OFFICE		VP: M. M. ESCOBAR CVSU		PRES: H. D. ROBLES CVSU		BACCOOR CITY		SHT NO.: FP-13	



VERIFY HEIGHTS



NOTE:
HASHMARKS DENOTE
NUMBER OF 2.0mm² THHN



FIRE ALARM SYSTEM RISER DIAGRAM (FDAS)

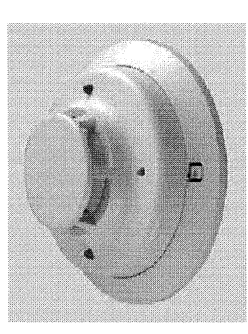
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FP-15

(SHOWING MANUAL STATIONS, BELLS AND SMOKE DETECTORS)

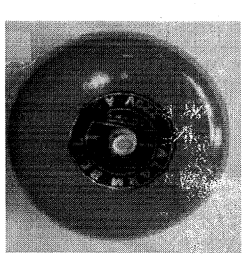
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TO

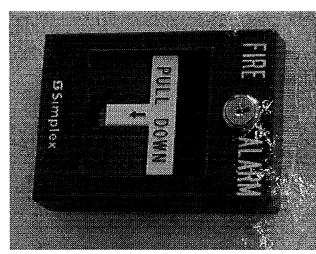
SCALE



2
FP-4
NOT
TO
SCALE
SMOKE DETECTOR



3
FP-4
NOT
TO
SCALE
FIRE ALARM BELL



4
FP-4
NOT
TO
SCALE
FIRE ALARM MANUAL STATION (FS)

LEGEND & SYMBOLS:

SYMBOL	DESCRIPTIONS
	SMOKE DETECTOR
	FIRE ALARM MANUAL STATION
	FIRE ALARM BELL OUTLET
	HOME-RUN TO FACP
	END-OF-LINE RESISTOR - EIR
	FIRE ALARM CONTROL PANEL
	2.0mm ² THHN IN 15mmØ C.

CADD BY: LORDLEY M. ABELLAR PPU OVPD PROFESSIONAL ENGINEER 		ENDORSED BY: O. B. DELOS REYES DIRECTOR PLANNING OFFICE		REC. APPROVAL: M. M. ESCOBAR VPPD CVSU		APPROVED BY: H. N. ROBLES PRES CVSU		PROJECT TITLE/LOCATION: IMPROVEMENT OF BACCOOR CAMPUS BACCOOR CITY		IMPLEMENTING AGENCY CAVITE STATE UNIVERSITY		SHT NO.: FP - 15	
END USER: M. MACALALAD DEAN CVSU - BACCOOR		ENDORSED BY: M. M. ESCOBAR VPPD CVSU		REC. APPROVAL: C. A. POLINGA VPASS CVSU		APPROVED BY: H. N. ROBLES PRES CVSU		PROJECT TITLE/LOCATION: IMPROVEMENT OF BACCOOR CAMPUS BACCOOR CITY		IMPLEMENTING AGENCY CAVITE STATE UNIVERSITY		SHT NO.: FP - 15	