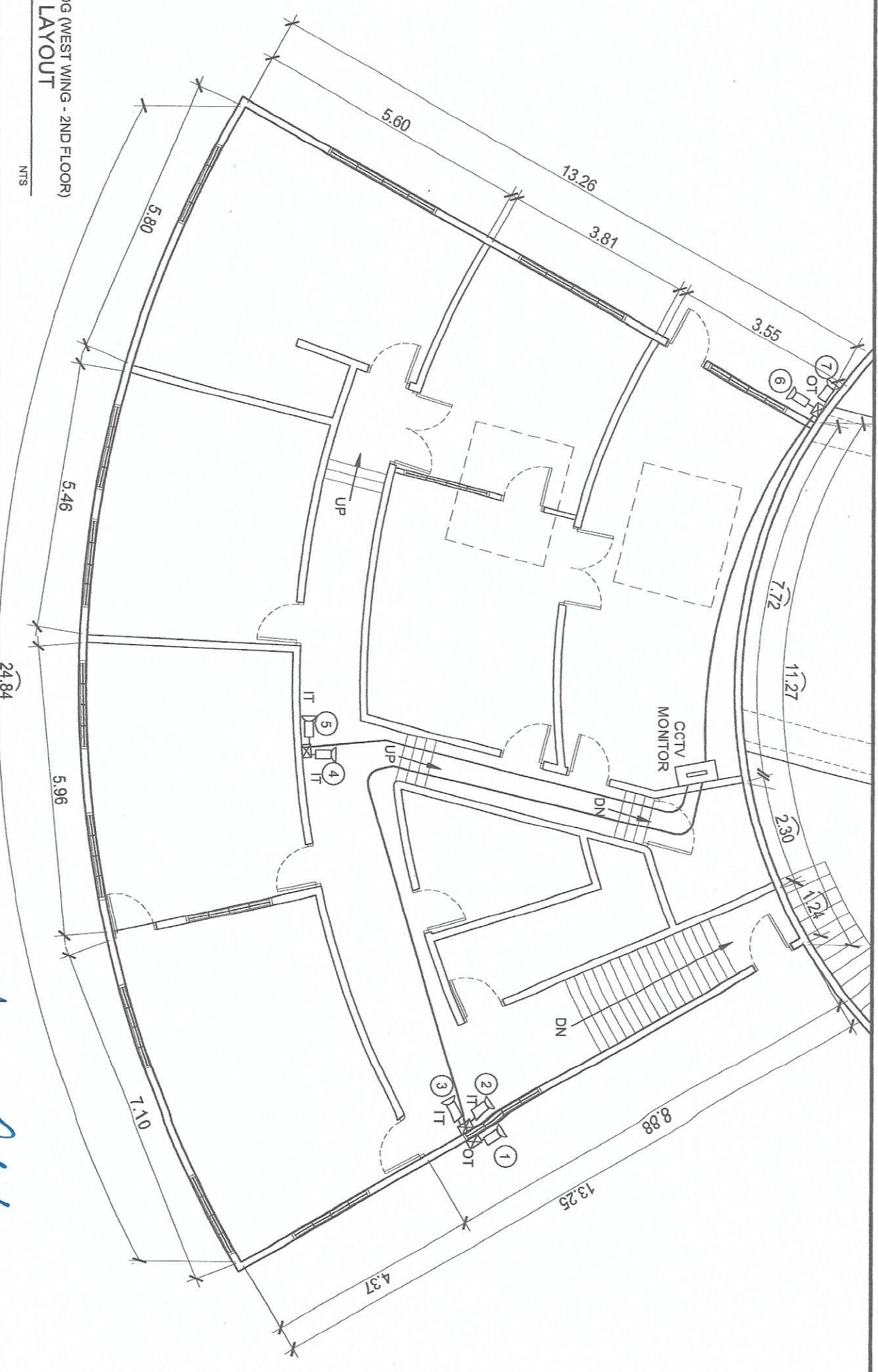


ARC. BLDG (WEST WING - 2ND FLOOR)
CCTV LAYOUT

1
SCALE
NTS



 Department of Science and Technology PHILIPPINES NUCLEAR RESEARCH INSTITUTE COMMONWEALTH AVENUE, DILMAN, QUEZON CITY	PROJECT UPGRADING OF ARC BLDG. (C.Y. 2020)	OWNER PHILIPPINES NUCLEAR RESEARCH INSTITUTE	SHEET CONTENT CCTV LAYOUT - WEST WING 2ND FLOOR	PREPARED BY ENGR. ROSA LUNA BELAS ENGR. ARTURO P. SACH ENGR. REMANDO HERRERA ENGR. REMANDO HERRERA	RECOMMENDING AGENCIES M. CETERINA M. RAMIRO LUCE MENDOZA, Ph.D. PROF. ROSA B. BARRERA, Ph.D. SOPHIA S. CASTANEDA, Ph.D.	APPROVED BY CARLOS A. ROLLA, Ph.D. DIRECTOR	DRAWN BY: GERALDO CHECKED BY: DATE: PROJECT NO.: E-7 PAGE NO.: 8/15
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UPGRADING OF
A.R.C. BLDG.
(C.Y. 2020)

PHILIPPINES NUCLEAR
RESEARCH INSTITUTE

DATA SYSTEM LAB
WEST WING
2ND FLOOR

Engr. ROSARIO B. RUIJAS
Senior Technical Advisor on Special
Engr. ARTURO F. SALIH
Senior Business Research Specialist
Engr. REMATO I. BANAGUA
ESS Head

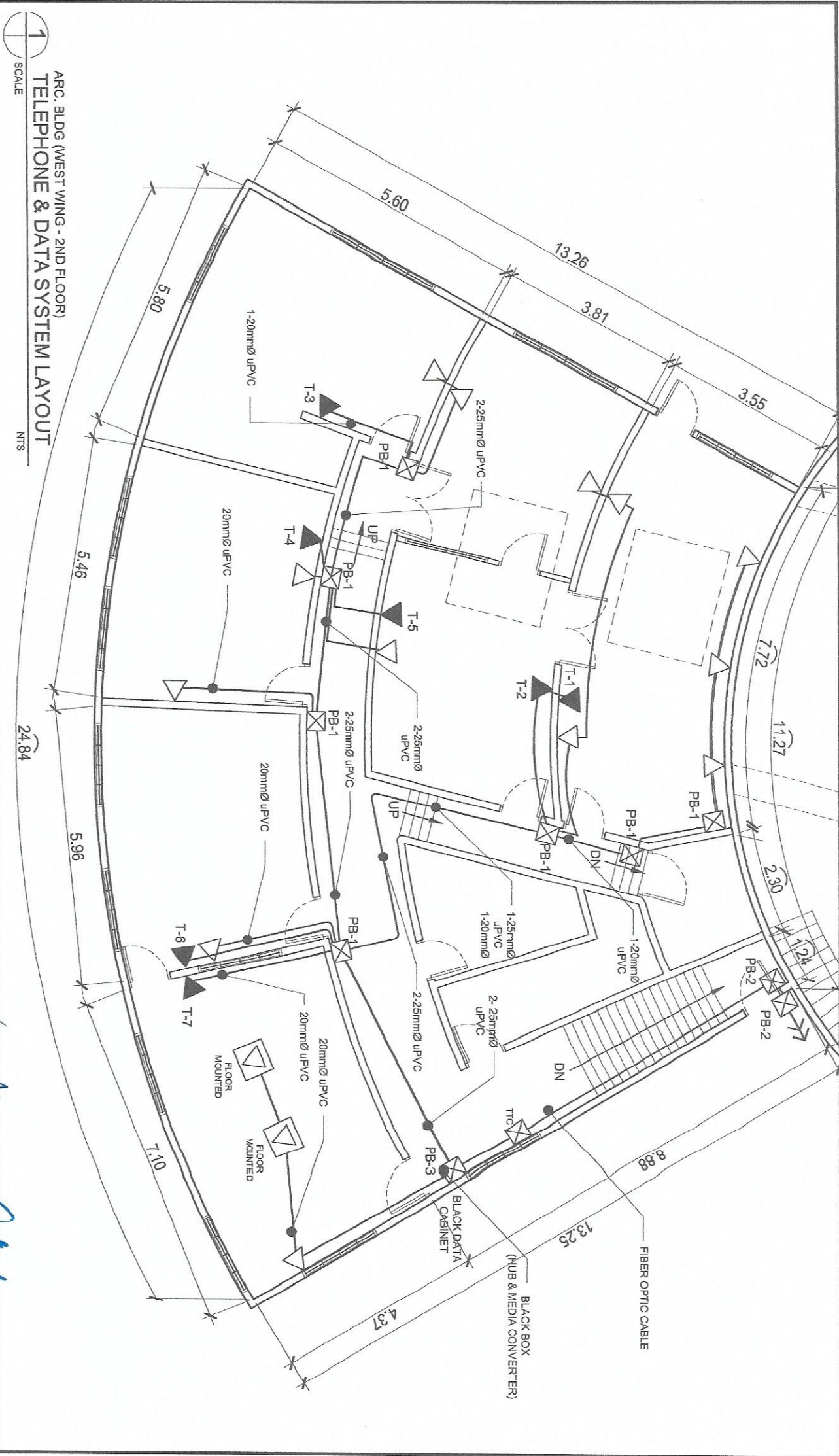
MA. GEXERINA M. RAMIRO
CHIEF, FAD
LUBIL EMBAD, Ph.D.
End User/Chief, ARD

PRECIOSA B. PABROA, Ph. D.
Chief, NRC

CARLO M. ARCILLI, Ph. D.
Director

CHECKED
DATE :
PROJ. NO.

E-0
PAGE NO.:
9/15





PHILIPPINES NUCLEAR
RESEARCH INSTITUTE

TELEPHONE & DATA CABLE CONNECTION LAYOUT

Engr. RENATO T. BANAAGA
ESS Head

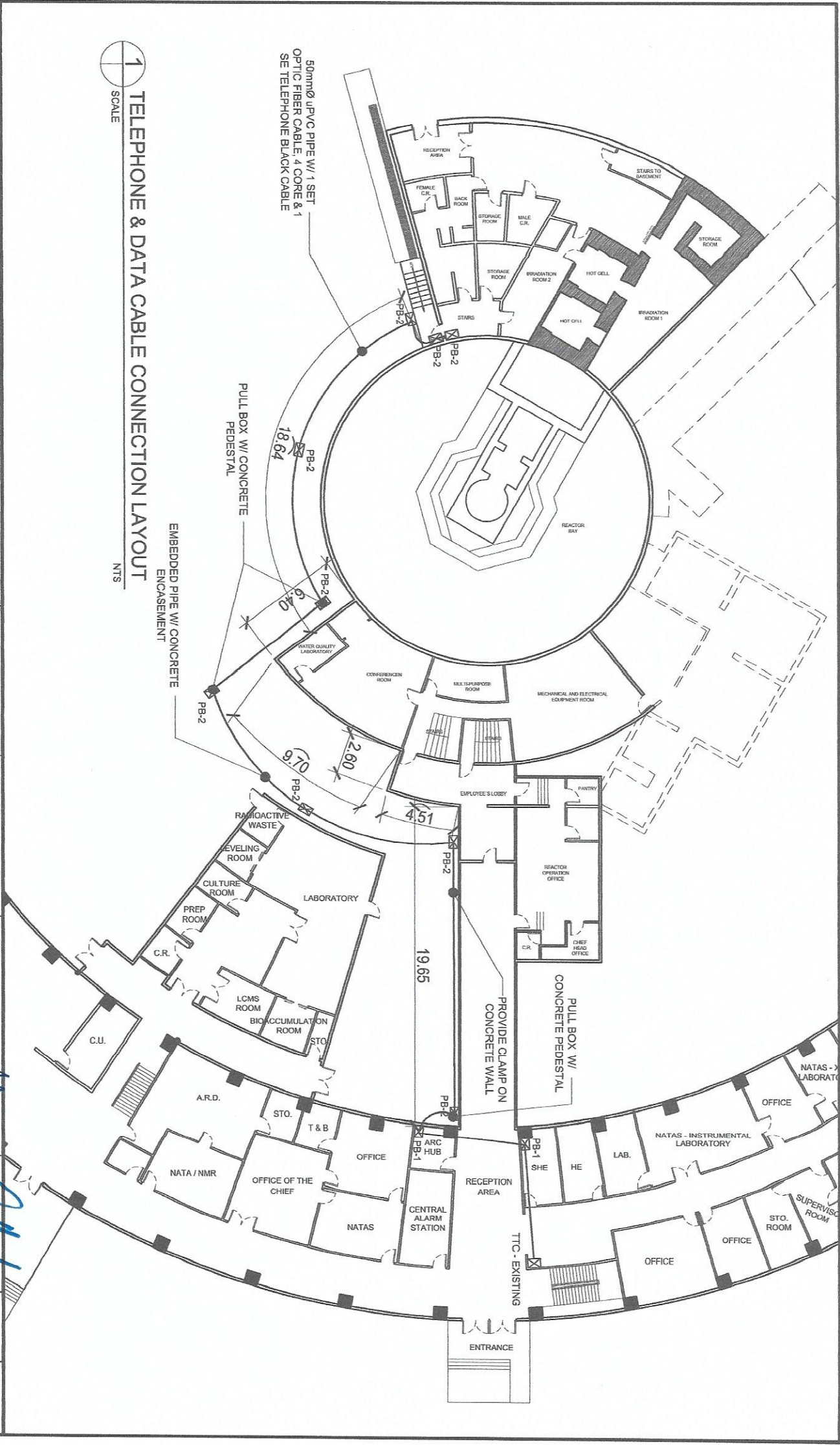
MA, CECILIA M. RAMIRO
CHAI, PAO
LUCILLE AND, Ph. D.
ER, MARCH, AND

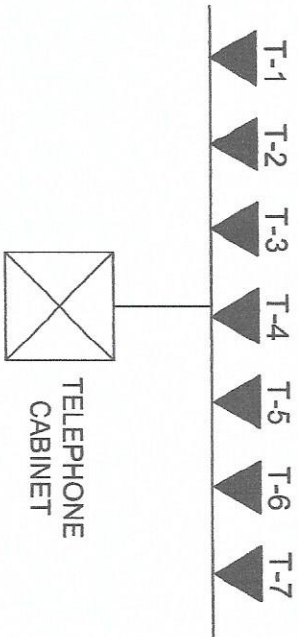
PRECIOSOS/B. LABROA, Ph. D.
Chair, NED

CARLO A. ARCILLA, Ph. D.
Director

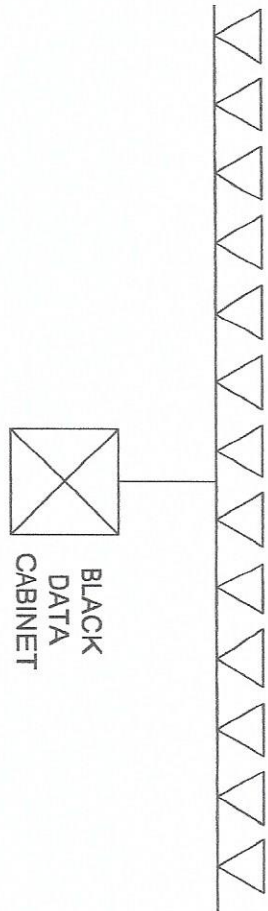
CHECKED
DATE :
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E-9
PAGE NO.:
10/15

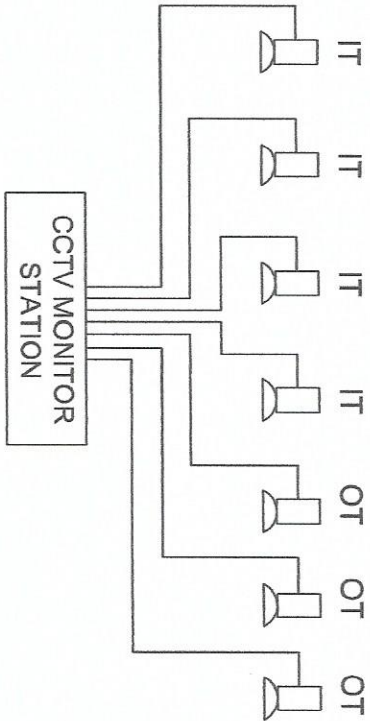




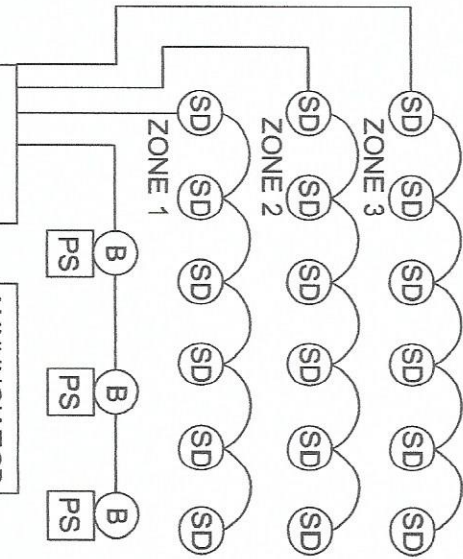
TELEPHONE RISER DIAGRAM



DATELAN RISER DIAGRAM



CCTV RISER DIAGRAM

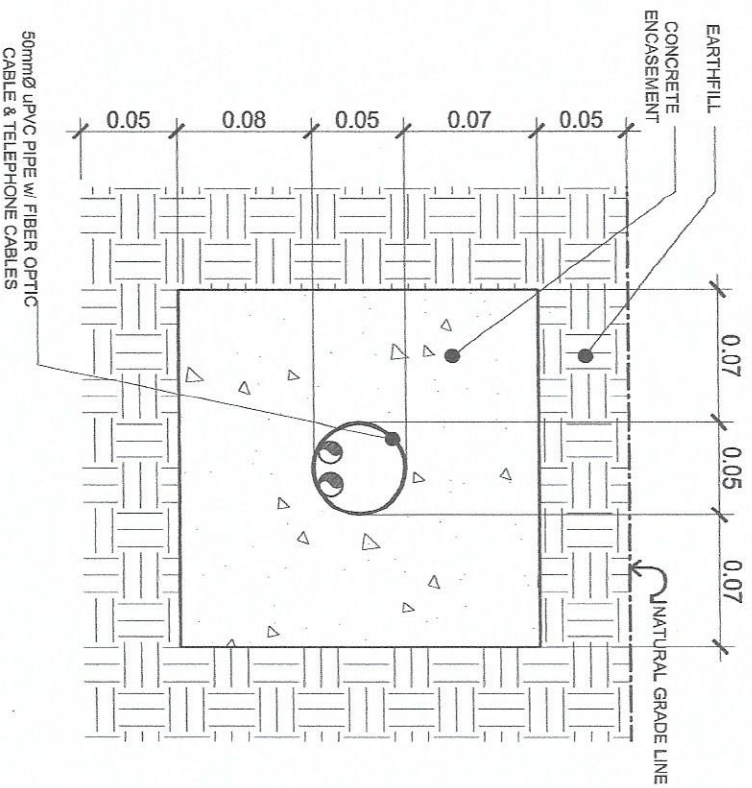


FIRE ALARM & SMOKE DETECTOR SYSTEM

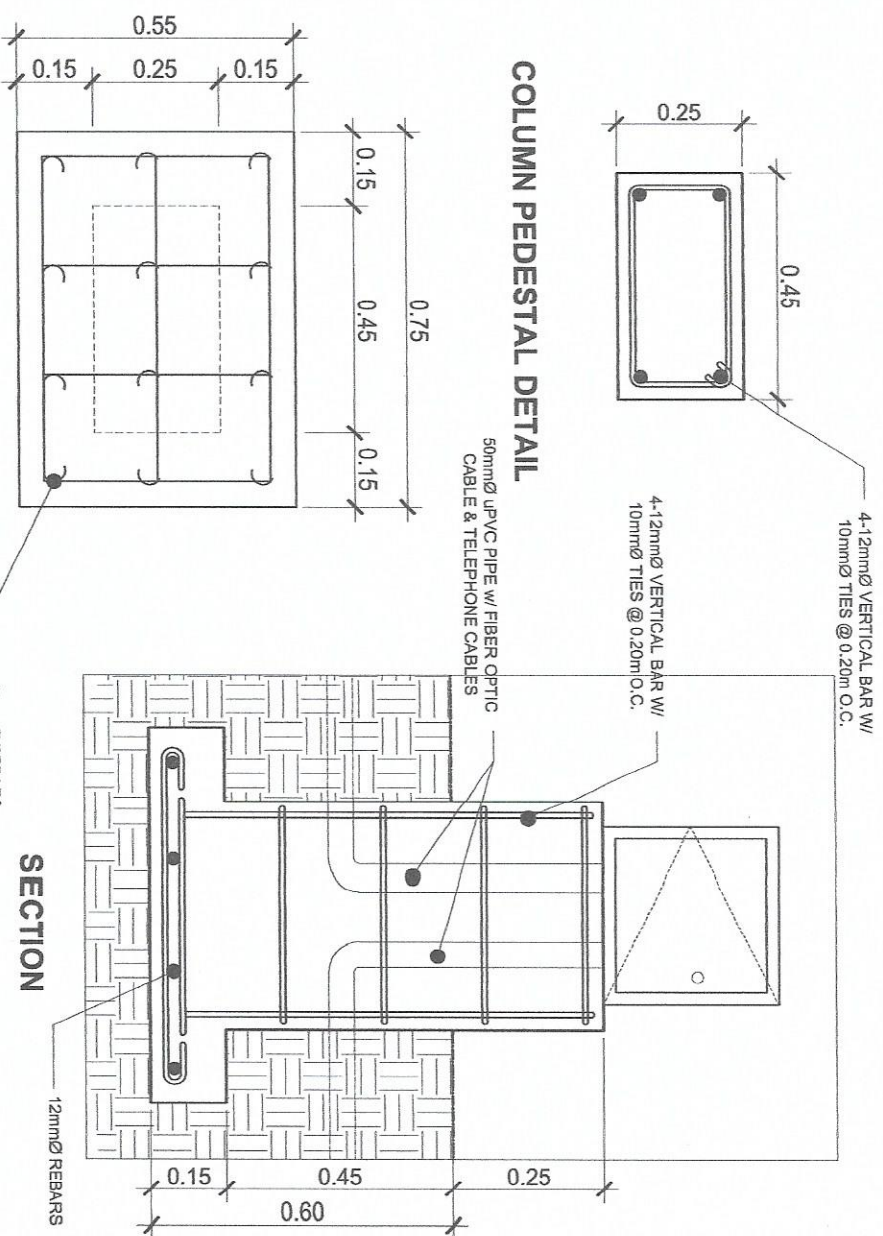
LEGEND:

- IT - INDOOR TYPE CAMERA
- OT - OUTDOOR TYPE CAMERA
- SD - SMOKE DETECTOR
- FACP - FIRE ALARM CONTROL PANEL
- B - ALARM BELL
- PS - PULL/PUSH SWITCH ALARM

 Republic of the Philippines DEPARTMENT OF SCIENCE AND TECHNOLOGY PHILIPPINE INSTITUTE OF TECHNOLOGY 3801 MARINA AVENUE, QUEZON CITY	PROJECT: UPGRADING OF A.R.C. BLDG. (C.Y. 2020) OWNER: PHILIPPINES NUCLEAR RESEARCH INSTITUTE ADDRESS: COMACKWELTAY AVENUE, OLIVIA, QUEZON CITY	SHEET CONTENT: ELECTRICAL POWER LAYOUT - WEST WING 2ND FLOOR	PREPARED BY: <i>[Signature]</i> Engr. BENJAMIN T. BANGGA Engr. BENJAMIN T. BANGGA Engr. BENJAMIN T. BANGGA	RECOMMENDING APPROVAL: <i>[Signature]</i> M.A. CERNILAL, PMIRO LUCILLE A. P.D. SOLANGE S. CASTANEDA P.D.	APPROVED BY: <i>[Signature]</i> CARLO K. ANIELLA, Engr. CARLO K. ANIELLA, Engr.	DESIGNED BY: E-10 CHECKED BY: DATE: 11/15 PROJECT NO.: 11/15
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1 CONCRETE ENCASUREMENT FOR UPVC PIPE UTILITY
SCALE NTS



2 PULLBOX CONCRETE COLUMN PEDESTAL DETAILS
SCALE NTS

 Republic of the Philippines DEPARTMENT OF SCIENCE AND TECHNOLOGY PHILIPPINES NUCLEAR RESEARCH INSTITUTE COMMUNAL, TANAUAN, DAVAO REGION CITY	PROJECT: UPGRADING OF A.R.C. BLDG. (C.Y. 2020) OWNER: PHILIPPINES NUCLEAR RESEARCH INSTITUTE ADDRESS: COMMUNAL, TANAUAN, DAVAO REGION CITY	SHEET CONTENT: ELECTRICAL - WEST WING 2ND FLOOR PREPARED BY: ENGR. ROSALIND B. RELAS ENGR. ARTURO I. SAKI ENGR. REMO T. SAMAGA	RECOMMENDING APPROVAL: MA. GERONA M. RAMIRO LUCILLE M. RAMIRO, D. SOLERIO S. CASTANEDA, Ph.D. APPROVED BY: CARLA AMIELLA, Ph.D.	DRAWN BY: GERIE XDO CHECKED BY: E-11 DATE: 12/15
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LOAD SCHEDULE

MAIN DISTRIBUTION PANELBOARD, MDP									
CIRCUIT NUMBER	VOLTS	LOAD DESCRIPTION	Watts/VA	PHASE LOADING			CIRCUIT BREAKER		
				ØAB	ØBC	ØCA	POLE	KAIC	TRIP
1	230	Panaelboard MP1		44.27	32.82	41.07	3	22	100
2	230	Panelboard MP2		55.08	61.63	52.98	3	22	100
3	230	Spare		40.00	40.00	40.00	3	22	60
				139.35	134.45	134.05			
COMPUTATION: $I_L = [(139.35)(1.732) + 25\% (10.18)] \times 80\% \text{ D.F.} = 195.11 \text{ A}$ $I_L = 195.11 \text{ amperes}$				MAIN FEEDER USE: 3 - 100 mm ² , 1 - 38mm ² THHN CABLE (Existing)			PROTECTION: USE: 200AT, 250AF, 3P, 230V, 22 KAIC Industrial Type Circuit Breaker		



Republic of the Philippines
DEPARTMENT OF SCIENCE AND TECHNOLOGY
PHILIPPINES NUCLEAR RESEARCH INSTITUTE
CRAMONDE AVENUE, PASAY CITY

PROJECT

OWNER

SHEET CONTENT

PREPARED BY

RECOMMENDING APPROVAL

APPROVED BY

DRAWN BY

SHEET NO.

UPGRADING OF
A.R.C. BLDG.
(C.Y. 2020)

PHILIPPINES NUCLEAR
RESEARCH INSTITUTE

LOAD SCHEDULE OF MDP
- WEST WING 2ND FLOOR

Engr. ROSALYN B. REAS
Engr. ARTURO S. SANCHEZ
Engr. REMON T. BANAAGA

M. GERARDO M. RAMIRO
LUCILIA P. D.
SOLERIO S. CASTAÑEDA, Ph.D.

CARLO A. COLLA, Ph.D.

ENGINEER
E-12
13/15

LOAD SCHEDULE

MAIN PANELBOARD , MP2										
CIRCUIT NUMBER	VOLTS	LOAD DESCRIPTION	Watts/VA	PHASE LOADING			CIRCUIT BREAKER		HOMERUN/WIRE SIZE	
				ØAB	ØBC	ØCA	POLE	KAIC		TRIP
1	230	15 Fluorescent Lightings, Double, 40W	1,200	5.22			2	22	15	2-3.5 mm ² , 1-20 mm ² THHN wire in 15mmØ RSC Pipe
2	230	7 Convenience Outlets	2,520		10.96		2	22	20	2-5.5 mm ² , 1-20 mm ² THHN wire in 15mmØ RSC Pipe
3	230	14 Fluorescent Lightings, Double, 40W	1,120			4.87	2	22	15	2-3.5 mm ² , 1-20 mm ² THHN wire in 15mmØ RSC Pipe
4	230	2 Hp Aircon, Split Type	1,863	8.10			2	22	30	2-5.5 mm ² , 1-20 mm ² THHN wire in 15mmØ RSC Pipe
5	230	9 Fluorescent Lightings, Double, 40W	720		3.13		2	22	15	2-3.5 mm ² , 1-20 mm ² THHN wire in 15mmØ RSC Pipe
6	230	4 Convenience Outlets	1,440			6.26	2	22	20	2-5.5 mm ² , 1-20 mm ² THHN wire in 15mmØ RSC Pipe
7	230	8 Fluorescent Lightings, Double, 40W	640	2.78			2	22	15	2-3.5 mm ² , 1-20 mm ² THHN wire in 15mmØ RSC Pipe
8	230	4 Convenience Outlets	1,440		6.26		2	22	20	2-5.5 mm ² , 1-20 mm ² THHN wire in 15mmØ RSC Pipe
9	230	11 Fluorescent Lightings, Double, 40W	880			3.83	2	22	15	2-3.5 mm ² , 1-20 mm ² THHN wire in 15mmØ RSC Pipe
10	230	8 Convenience Outlets	2,880	12.52			2	22	20	2-5.5 mm ² , 1-20 mm ² THHN wire in 15mmØ RSC Pipe
11	230	12 Fluorescent Lightings, Double, 40W	960		4.17		2	22	15	2-3.5 mm ² , 1-20 mm ² THHN wire in 15mmØ RSC Pipe
12	230	2.5 Hp Aircon, Split Type	2,342			10.18	2	22	40	2-8.0 mm ² , 1-3.5 mm ² THHN wire in 20mmØ RSC Pipe
13	230	6 Convenience Outlets	2,160	9.39			2	22	20	2-5.5 mm ² , 1-20 mm ² THHN wire in 15mmØ RSC Pipe
14	230	5 Convenience Outlets	1,800		7.83		2	22	20	2-5.5 mm ² , 1-20 mm ² THHN wire in 15mmØ RSC Pipe
15	230	2 Hp Aircon, Split Type	1,863			8.10	2	22	30	2-5.5 mm ² , 1-20 mm ² THHN wire in 15mmØ RSC Pipe
16	230	4 Convenience Outlets	1,440	6.26			2	22	20	2-5.5 mm ² , 1-20 mm ² THHN wire in 15mmØ RSC Pipe
17	230	18 Emergency Lightings, 2x3W	108		0.47		2	22	15	2-3.5 mm ² , 1-20 mm ² THHN wire in 15mmØ RSC Pipe
18	230	5 Convenience Outlets	1,800			7.83	2	22	20	2-5.5 mm ² , 1-20 mm ² THHN wire in 15mmØ RSC Pipe
COMPUTATION: $I_L = [(44.27)(1.732) + 25\% (17.2)] \times 80\% D.F. = 63.37 A$ $I_L = 63.37 \text{ amperes}$				MAIN FEEDER USE: 3 - 30 mm ² , 1 - 14mm ² THHN CABLE on 50 mm. Diameter RSC Pipe			PROTECTION: USE: 100A1, 200A1, 3P, 230V, 22 KAIC Industrial Type Circuit Breaker			
				44.27	32.82	41.07				



Republic of the Philippines
DEPARTMENT OF SCIENCE AND TECHNOLOGY
PHILIPPINES NUCLEAR RESEARCH INSTITUTE
CAMPUS: NIA BLDG. (SUITE 201)
DOST-APRIL 2020

PROJECT:UPGRADING OF
A.R.C. BLDG.
(C.Y. 2020)

OWNER:PHILIPPINES NUCLEAR
RESEARCH INSTITUTE

SHEET CONTENT:LOAD SCHEDULE OF MP2
- WEST WING 2ND FLOOR

PREPARED BY:
Engr. ROSALINDA REYES
Engr. RUTH ROSE
Engr. REMOT BAKAGA

RECOMMENDED APPROVAL:
IA: CECILIA M. RAMIRO
LIA: JUAN P. D.
SCIENTIST S. CASTAÑEDA, Ph.D.

APPROVED BY:
Engr. RUTH ROSE
Engr. RUTH ROSE

DRAWN BY: JENIAKO

CHECKED BY:

DATE:

PAGE NO.: 14/15

E-13

LOAD SCHEDULE

MAIN PANELBOARD , NP1										
CIRCUIT NUMBER	VOLTS	LOAD DESCRIPTION	WattsVA	PHASE LOADING			CIRCUIT BREAKER			HOMERUN WIRE SIZE
				ØAB	ØBC	ØCA	POLE	KAIC	TRIP	
1	230	5 Convenience Outlets	1,800	7.82			2	22	20	2-5.5 mm ² , 1-2.0 mm ² THHN wire in 15mmØ RSC Pipe
2	230	Drying Oven	3,680		16.00		2	22	30	2-5.5 mm ² , 1-2.0 mm ² THHN wire in 15mmØ RSC Pipe
3	230	Floor Mounted Outlet (1)	1,840			8.00	2	22	20	2-5.5 mm ² , 1-2.0 mm ² THHN wire in 15mmØ RSC Pipe
4	230	Special Equipment	2,000	8.69			2	22	20	2-5.5 mm ² , 1-2.0 mm ² THHN wire in 15mmØ RSC Pipe
5	230	4 Convenience Outlets	1,440		6.26		2	22	20	2-5.5 mm ² , 1-2.0 mm ² THHN wire in 15mmØ RSC Pipe
6	230	Floor Mounted Outlet (1)	1,840			8.00	2	22	20	2-5.5 mm ² , 1-2.0 mm ² THHN wire in 15mmØ RSC Pipe
7	230	2.5 Hp Aircon, Split Type	2,342	10.18			2	22	40	2-8.0 mm ² , 1-3.5 mm ² THHN wire in 20mmØ RSC Pipe
8	230	Fumehood	4,140		10.00		2	22	30	2-5.5 mm ² , 1-2.0 mm ² THHN wire in 15mmØ RSC Pipe
9	230	2 Hp Aircon, Split Type	1,863			8.10	2	22	30	2-5.5 mm ² , 1-2.0 mm ² THHN wire in 15mmØ RSC Pipe
10	230	7 Convenience Outlets	2,520	10.95			2	22	20	2-5.5 mm ² , 1-2.0 mm ² THHN wire in 15mmØ RSC Pipe
11	230	7 Convenience Outlets	2,520		10.95		2	22	20	3-8.0 mm ² , 1-3.5 mm ² THHN wire in 20mmØ RSC Pipe
12	230	4 Convenience Outlets	1,440			6.26	2	22	20	2-5.5 mm ² , 1-2.0 mm ² THHN wire in 15mmØ RSC Pipe
13	230	Special Outlet	1,500	6.52			2	22	20	2-5.5 mm ² , 1-2.0 mm ² THHN wire in 15mmØ RSC Pipe
14	230	4 Convenience Outlets	1,440		6.26		2	22	20	2-5.5 mm ² , 1-2.0 mm ² THHN wire in 15mmØ RSC Pipe
15	230	2 Hp Aircon, Split Type	1,863			8.10	2	22	30	2-5.5 mm ² , 1-2.0 mm ² THHN wire in 15mmØ RSC Pipe
16	230	5 Convenience Outlets	1,800	7.82			2	22	20	2-5.5 mm ² , 1-2.0 mm ² THHN wire in 15mmØ RSC Pipe
17	230	5 Convenience Outlets	1,800		7.82		2	22	20	2-5.5 mm ² , 1-2.0 mm ² THHN wire in 15mmØ RSC Pipe
18	230	2.5 Hp Aircon, Split Type				10.18	2	22	40	2-8.0 mm ² , 1-3.5 mm ² THHN wire in 20mmØ RSC Pipe
19	230	2 Floor Mounted Outlets	720	3.10			2	22	20	2-5.5 mm ² , 1-2.0 mm ² THHN wire in 15mmØ RSC Pipe
20	230	Spare	1,000		4.34		2	22	20	
21	230	Spare	1,000			4.34	2	22	20	
COMPUTATION: I _L = [(61.63)/1.732] + 25% (10.18)] x 80% D.F. = 87.43 A I _L = 87.43 amperes				MAIN FEEDER 55.08 61.63 52.98			PROTECTION: 100AT, 200AF, 3P, 230V, 22 KAIC Industrial Type Circuit Breaker			



Republic of the Philippines
DEPARTMENT OF SCIENCE AND TECHNOLOGY
PHILIPPINES NUCLEAR RESEARCH INSTITUTE
COMMONWEALTH AVENUE, DILIMAN, QUEZON CITY

PROJECT:UPGRADING OF A.R.C. BLDG. (C.Y. 2020)

OWNER:PHILIPPINES NUCLEAR RESEARCH INSTITUTE

AGENCIES:COMMONWEALTH AVENUE, DILIMAN, QUEZON CITY

LOAD SCHEDULE OF MP1 - WEST WING 2ND FLOOR

PREPARED BY:
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Engr. ARMANDO F. SANTIAGO
Engr. REMATO B. BALERA

RECOMMENDED APPROVAL:
IAA GEMINA M. RAMIRO
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SOLMENDO S. CASTANEDA, Ph. D.

APPROVED BY:
CARLO MARICELA P. D.

DRAWN BY: GEMILANO
CHECKED BY:
DATE:
PROJECT NO.: E-14
15/15