

POWER PANEL BOARD 3F - SCHEDULE OF LOADS

PANEL NO.	CKT NO.	LOAD DESCRIPTION	L.O.	C.O.	OTHER LOADS	HP RATING	SWITCHES					VOLTAGE RATING	OUTLET (VA) RATING	VA PER CIRCUIT	CIRCUIT LOAD CURRENT (W/DF)	SIZE OF BREAKERS			SIZE OF HOMERUN CKT		
							S ₁	S ₂	S ₃	S _{3W}	S _{4W}					F	P	T	WIRE (sq. mm)	CONDUIT	GROUNDING
PPB3	C1	Convenience Outlet		10							230	180	1800	6.26	60	2	20	2 - 3.5 mm ² THHN Copper Wire	20 mm Ø Conduit - PVC	1 - 3.5 mm ² THHN Copper Wire	
	C2	Convenience Outlet		10							230	180	1800	6.26	25	2	20	2 - 3.5 mm ² THHN Copper Wire	20 mm Ø Conduit - PVC	1 - 3.5 mm ² THHN Copper Wire	
	C3	Convenience Outlet		10							230	180	1800	6.26	60	2	20	2 - 3.5 mm ² THHN Copper Wire	20 mm Ø Conduit - PVC	1 - 3.5 mm ² THHN Copper Wire	
	C4	Convenience Outlet		10							230	180	1800	6.26	60	2	20	2 - 3.5 mm ² THHN Copper Wire	20 mm Ø Conduit - PVC	1 - 3.5 mm ² THHN Copper Wire	
	C5	Convenience Outlet		10							230	180	1800	6.26	60	2	20	2 - 3.5 mm ² THHN Copper Wire	20 mm Ø Conduit - PVC	1 - 3.5 mm ² THHN Copper Wire	
	C6	Convenience Outlet		17							230	180	3060	10.64	60	2	25	2 - 3.5 mm ² THHN Copper Wire	20 mm Ø Conduit - PVC	1 - 3.5 mm ² THHN Copper Wire	
	C7	Convenience Outlet		5							230	180	900	3.13	60	2	20	2 - 3.5 mm ² THHN Copper Wire	20 mm Ø Conduit - PVC	1 - 3.5 mm ² THHN Copper Wire	
	C8	Convenience Outlet		6							230	180	1080	3.76	60	2	20	2 - 3.5 mm ² THHN Copper Wire	20 mm Ø Conduit - PVC	1 - 3.5 mm ² THHN Copper Wire	
	C9	Convenience Outlet		13							230	180	2340	8.14	60	2	20	2 - 3.5 mm ² THHN Copper Wire	20 mm Ø Conduit - PVC	1 - 3.5 mm ² THHN Copper Wire	
	C10	Convenience Outlet - Emergency		13							230	180	2340	10.17	60	2	20	2 - 3.5 mm ² THHN Copper Wire	20 mm Ø Conduit - PVC	1 - 3.5 mm ² THHN Copper Wire	
	C11	Convenience Outlet - Emergency		13							230	180	2340	10.17	60	2	20	2 - 3.5 mm ² THHN Copper Wire	20 mm Ø Conduit - PVC	1 - 3.5 mm ² THHN Copper Wire	
	C12	SPARE									230	1500	1500	5.22	60	2	20				
	C13	SPARE									230	1500	1500	5.22	60	2	20				
TOTAL			0	117	0	0	0	0	0	0			24060	87.76							

Calculation:

For Service Conductor
IL = 87.76 x 125%
109.7

For Service Protection
IL = 87.76 x 125%
109.7

THEREFORE USE 125 AMPERE CIRCUIT BREAKER, 1 PHASE, 230V
USE 2 - 50 mm² THHN COPPER, 1 - 14 mm² GROUND @ 50 mm Ø Conduit - PVC

Load Type	VA	FLC
LD	0.00	0.00
CD	21060.00	77.32
ACU	0.00	0.00
MOTOR (NC)	0.00	0.00
MOTOR (C)	0.00	0.00
LARGEST MOTOR	0.00	0.00
SPARE	3000.00	10.43
TOTAL	24060.00	87.76

POWER PANEL BOARD 4F - SCHEDULE OF LOADS

PANEL NO.	CKT NO.	LOAD DESCRIPTION	L.O.	C.O.	OTHER LOADS	HP RATING	SWITCHES					VOLTAGE RATING	OUTLET (VA) RATING	VA PER CIRCUIT	CIRCUIT LOAD CURRENT (W/DF)	SIZE OF BREAKERS			SIZE OF HOMERUN CKT		
							S ₁	S ₂	S ₃	S _{3W}	S _{4W}					F	P	T	WIRE (sq. mm)	CONDUIT	GROUNDING
PPB4	C1	Convenience Outlet		10							230	180	1800	6.26	60	2	20	2 - 3.5 mm ² THHN Copper Wire	20 mm Ø Conduit - PVC	1 - 3.5 mm ² THHN Copper Wire	
	C2	Convenience Outlet		10							230	180	1800	6.26	60	2	20	2 - 3.5 mm ² THHN Copper Wire	20 mm Ø Conduit - PVC	1 - 3.5 mm ² THHN Copper Wire	
	C3	Convenience Outlet		10							230	180	1800	6.26	60	2	20	2 - 3.5 mm ² THHN Copper Wire	20 mm Ø Conduit - PVC	1 - 3.5 mm ² THHN Copper Wire	
	C4	Convenience Outlet		10							230	180	1800	6.26	60	2	20	2 - 3.5 mm ² THHN Copper Wire	20 mm Ø Conduit - PVC	1 - 3.5 mm ² THHN Copper Wire	
	C5	Convenience Outlet		10							230	180	1800	6.26	60	2	20	2 - 3.5 mm ² THHN Copper Wire	20 mm Ø Conduit - PVC	1 - 3.5 mm ² THHN Copper Wire	
	C6	Convenience Outlet		17							230	180	3060	10.64	60	2	25	2 - 3.5 mm ² THHN Copper Wire	20 mm Ø Conduit - PVC	1 - 3.5 mm ² THHN Copper Wire	
	C7	Convenience Outlet		5							230	180	900	3.13	60	2	20	2 - 3.5 mm ² THHN Copper Wire	20 mm Ø Conduit - PVC	1 - 3.5 mm ² THHN Copper Wire	
	C8	Convenience Outlet		6							230	180	1080	3.76	60	2	20	2 - 3.5 mm ² THHN Copper Wire	20 mm Ø Conduit - PVC	1 - 3.5 mm ² THHN Copper Wire	
	C9	Convenience Outlet		13							230	180	2340	8.14	60	2	20	2 - 3.5 mm ² THHN Copper Wire	20 mm Ø Conduit - PVC	1 - 3.5 mm ² THHN Copper Wire	
	C10	Convenience Outlet - Emergency		13							230	180	2340	10.17	60	2	20	2 - 3.5 mm ² THHN Copper Wire	20 mm Ø Conduit - PVC	1 - 3.5 mm ² THHN Copper Wire	
	C11	Convenience Outlet - Emergency		13							230	180	2340	10.17	60	2	20	2 - 3.5 mm ² THHN Copper Wire	20 mm Ø Conduit - PVC	1 - 3.5 mm ² THHN Copper Wire	
	C12	SPARE									230	1500	1500	5.22	60	2	20				
	C13	SPARE									230	1500	1500	5.22	60	2	20				
TOTAL			0	117	0	0	0	0	0	0			24060	87.76							

Calculation:

For Service Conductor
IL = 87.76 x 125%
109.7

For Service Protection
IL = 87.76 x 125%
109.7

THEREFORE USE 125 AMPERE CIRCUIT BREAKER, 1 PHASE, 230V
USE 2 - 50 mm² THHN COPPER, 1 - 14 mm² GROUND @ 50 mm Ø Conduit - PVC

Load Type	VA	FLC
LD	0.00	0.00
CD	21060.00	77.32
ACU	0.00	0.00
MOTOR (NC)	0.00	0.00
MOTOR (C)	0.00	0.00
LARGEST MOTOR	0.00	0.00
SPARE	3000.00	10.43
TOTAL	24060.00	87.76



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CAGAYAN DE ORO CAMPUS
INFRASTRUCTURE PLANNING AND FACILITY DEVELOPMENT UNIT
CLARO M. RECTO AVENUE, LAPASAN, CAGAYAN DE ORO CITY 9000
TELEPHONE # (08822) 72-60-65 / (088) 856-1738 / 856-1739 | TELE FAX (088) 856-4698
WEBSITE: www.ustp.edu.ph

PROFESSIONAL ELECTRICAL ENGINEER

PROJECT
LOCATION
OWNER

PROPOSED CONSTRUCTION OF SMART ACADEMIC BUILDING
PHASE 1, JASAAN CAMPUS
USTP JASAAN CAMPUS, MISAMIS ORIENTAL
UNIVERSITY OF SCIENCE AND TECHNOLOGY OF SOUTHERN PHILIPPINES

RECOMMENDING APPROVAL:

ENGR. GRACE C. BABA

DIRECTOR, INFRASTRUCTURE PLANNING & FACILITIES DEVELOPMENT OFFICE

RECOMMENDING APPROVAL:

ATTY. ERWIN B. BULCO

VP FOR ADMINISTRATION & LEGAL AFFAIRS

APPROVED BY:

DR. AMBROSIO B. CULTURA II

PRESIDENT, USTP SYSTEM

SHEET CONTENTS:
SCHEDULE OF LOADS

DRAWN BY:

DATE DRAWN:

16.01.2025

FNT:

E17

POWER PANEL BOARD 5F - SCHEDULE OF LOADS

PANEL NO.	CKT NO.	LOAD DESCRIPTION	L.O.	C.O.	OTHER LOADS	HP RATING	SWITCHES					VOLTAGE RATING	OUTLET (VA) RATING	VA PER CIRCUIT	CIRCUIT LOAD CURRENT (W/DF)	SIZE OF BREAKERS			SIZE OF HOMERUN CKT		
							S ₁	S ₂	S ₃	S _{3W}	S _{4W}					F	P	T	WIRE (sq. mm)	CONDUIT	GROUNDING
PPB5	C1	Convenience Outlet		10							230	180	1800	6.26	60	2	20	2 - 3.5 mm ² THHN Copper Wire	20 mm ø Conduit - PVC	1 - 3.5 mm ² THHN Copper Wire	
	C2	Convenience Outlet		10							230	180	1800	6.26	60	2	20	2 - 3.5 mm ² THHN Copper Wire	20 mm ø Conduit - PVC	1 - 3.5 mm ² THHN Copper Wire	
	C3	Convenience Outlet		7							230	180	1260	4.38	60	2	20	2 - 3.5 mm ² THHN Copper Wire	20 mm ø Conduit - PVC	1 - 3.5 mm ² THHN Copper Wire	
	C4	Convenience Outlet		12							230	180	2160	7.51	60	2	20	2 - 3.5 mm ² THHN Copper Wire	20 mm ø Conduit - PVC	1 - 3.5 mm ² THHN Copper Wire	
	C5	Convenience Outlet		15							230	180	2700	9.39	60	2	25	2 - 3.5 mm ² THHN Copper Wire	20 mm ø Conduit - PVC	1 - 3.5 mm ² THHN Copper Wire	
	C6	Convenience Outlet		6							230	180	1080	3.76	60	2	20	2 - 3.5 mm ² THHN Copper Wire	20 mm ø Conduit - PVC	1 - 3.5 mm ² THHN Copper Wire	
	C7	Convenience Outlet		15							230	180	2700	9.39	60	2	25	2 - 3.5 mm ² THHN Copper Wire	20 mm ø Conduit - PVC	1 - 3.5 mm ² THHN Copper Wire	
	C8	Convenience Outlet - Emergency		14							230	180	2520	10.96	60	2	20	2 - 3.5 mm ² THHN Copper Wire	20 mm ø Conduit - PVC	1 - 3.5 mm ² THHN Copper Wire	
	C9	Convenience Outlet - Emergency		7							230	180	1260	5.48	60	2	20	2 - 3.5 mm ² THHN Copper Wire	20 mm ø Conduit - PVC	1 - 3.5 mm ² THHN Copper Wire	
	C10	Convenience Outlet - Emergency		10							230	180	1800	7.83	60	2	20	2 - 3.5 mm ² THHN Copper Wire	20 mm ø Conduit - PVC	1 - 3.5 mm ² THHN Copper Wire	
	C11	SPARE									230	1500	1500	5.22	60	2	20				
	C12	SPARE									230	1500	1500	5.22	60	2	20				
TOTAL			0	106	0	0	0	0	0	0			22080	81.65							

Calculation:

For Service Conductor
IL = 81.65 x 125%
102.07

For Service Protection
IL = 81.65 x 125%
102.07

THEREFORE USE 125 AMPERE CIRCUIT BREAKER, 1 PHASE, 230V
USE 2 - 50 mm² THHN COPPER, 1 - 14 mm² GROUND @ 50 mm ø Conduit - PVC

Load Type	VA	FLC
LD	0.00	0.00
CD	19080.00	71.22
ACU	0.00	0.00
MOTOR (NC)	0.00	0.00
MOTOR (C)	0.00	0.00
LARGEST MOTOR	0.00	0.00
SPARE	3000.00	10.43
TOTAL	22080.00	81.65

ACU PANEL BOARD 1F - SCHEDULE OF LOADS

PANEL NO.	CKT NO.	LOAD DESCRIPTION	L.O.	C.O.	OTHER LOADS	HP RATING	SWITCHES					VOLTAGE RATING	OUTLET (VA) RATING	VA PER CIRCUIT	CIRCUIT LOAD CURRENT (W/DF)				SIZE OF BREAKERS			SIZE OF HOMERUN CKT		
							S ₁	S ₂	S ₃	S _{3W}	S _{4W}				AB	BC	CA	3P	F	P	T	WIRE (sq. mm)	CONDUIT	GROUNDING
APB1	C1	ACCU-1-01			1	5					230	6440	6440	28.00					60	2	60	2 - 8 mm ² THHN Copper Wire	25 mm ø Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire
	C2	ACCU-1-02			1	4					230	5175	5175	22.50					60	2	50	2 - 8 mm ² THHN Copper Wire	25 mm ø Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire
	C3	ACCU-1-02			1	4					230	5175	5175				22.50		60	2	50	2 - 8 mm ² THHN Copper Wire	25 mm ø Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire
	C4	ACCU-1-03			1	4					230	5175	5175				22.50		60	2	50	2 - 8 mm ² THHN Copper Wire	25 mm ø Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire
	C5	ACCU-1-03			1	4					230	5175	5175				22.50		60	2	50	2 - 8 mm ² THHN Copper Wire	25 mm ø Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire
	C6	ACCU-1-04			1	4					230	5175	5175				22.50		60	2	50	2 - 8 mm ² THHN Copper Wire	25 mm ø Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire
	C7	ACCU-1-04			1	4					230	5175	5175	22.50					60	2	50	2 - 8 mm ² THHN Copper Wire	25 mm ø Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire
	C8	ACCU-1-05			1	4					230	5175	5175	22.50					60	2	50	2 - 8 mm ² THHN Copper Wire	25 mm ø Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire
	C9	ACCU-1-05			1	4					230	5175	5175				22.50		60	2	50	2 - 8 mm ² THHN Copper Wire	25 mm ø Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire
	C10	ACCU-1-06			1	4					230	5175	5175				22.50		60	2	50	2 - 8 mm ² THHN Copper Wire	25 mm ø Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire
	C11	ACCU-1-06			1	4					230	5175	5175				22.50		60	2	50	2 - 8 mm ² THHN Copper Wire	25 mm ø Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire
	C12	ACCU-1-07			1	2.5					230	3335	3335				14.50		60	2	30	2 - 5.5 mm ² THHN Copper Wire	20 mm ø Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire
	C13	ACCU-1-08			1	2.5					230	3335	3335	14.50					60	2	30	2 - 5.5 mm ² THHN Copper Wire	20 mm ø Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire
	C14	ACCU-1-08			1	2.5					230	3335	3335	14.50					60	2	30	2 - 5.5 mm ² THHN Copper Wire	20 mm ø Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire
	C15	SPARE									230	1500	1500				5.22		60	2	20			
	C16	SPARE									230	1500	1500				5.22		60	2	20			
TOTAL			0	0	14	52.5	0	0	0	0			71195	124.50	82.00	100.43	0.00							

Calculation:

For Service Conductor
IL = (124.5 + 25% (28)) x 1.732 + 0
227.76 A

For Service Protection
IL = (124.5 + 150% (28)) x 1.732 + 0
288.39 A

THEREFORE USE 300 AMPERE CIRCUIT BREAKER, 3 PHASE, 230V
USE 3 - 125 mm² THHN COPPER, 1 - 22 mm² GROUND @ 75 mm ø Conduit - PVC

Load Type	VA	FLC			
		AB	BC	CA	3P
LD	0.00	0.00	0.00	0.00	0.00
CD	0.00	0.00	0.00	0.00	0.00
ACU	68195.00	124.50	82.00	90.00	0.00
MOTOR (NC)	0.00	0.00	0.00	0.00	0.00
MOTOR (C)	0.00	0.00	0.00	0.00	0.00
LARGEST MOTOR	0.00	0.00	0.00	0.00	0.00
SPARE	3000.00	0.00	0.00	10.43	0.00
TOTAL	71195.00	124.50	82.00	100.43	0.00



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PRESIDENT, USTP SYSTEM

SHEET CONTENTS:
SCHEDULE OF LOADS

DRAWN BY:

DATE DRAWN:
10.01.2025
FNT:

E18

ACU PANEL BOARD 2F - SCHEDULE OF LOADS

PANEL NO.	CKT NO.	LOAD DESCRIPTION	L.O.	C.O.	OTHER LOADS	HP RATING	SWITCHES					VOLTAGE RATING	OUTLET (VA) RATING	VA PER CIRCUIT	CIRCUIT LOAD CURRENT (W/DF)				SIZE OF BREAKERS			SIZE OF HOMERUN CKT		
							S ₁	S ₂	S ₃	S _{3W}	S _{4W}				AB	BC	CA	3P	F	P	T	WIRE (sq. mm)	CONDUIT	GROUNDING
APB2	C1	ACCU-2-01			1	2.5					230	3335	3335	14.50				60	2	30	2 - 5.5 mm ² THHN Copper Wire	20 mm ø Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire	
	C2	ACCU-2-02			1	2.5					230	3335	3335	14.50				60	2	30	2 - 5.5 mm ² THHN Copper Wire	20 mm ø Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire	
	C3	ACCU-2-02			1	2.5					230	3335	3335			14.50		60	2	30	2 - 5.5 mm ² THHN Copper Wire	20 mm ø Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire	
	C4	ACCU-2-03			1	1					230	1840	1840			8.00		60	2	20	2 - 5.5 mm ² THHN Copper Wire	20 mm ø Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire	
	C5	ACCU-2-04			1	3					230	3910	3910			17.00		60	2	35	2 - 5.5 mm ² THHN Copper Wire	20 mm ø Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire	
	C6	ACCU-2-04			1	3					230	3910	3910			17.00		60	2	35	2 - 5.5 mm ² THHN Copper Wire	20 mm ø Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire	
	C7	ACCU-2-04			1	3					230	3910	3910	17.00				60	2	35	2 - 5.5 mm ² THHN Copper Wire	20 mm ø Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire	
	C8	ACCU-2-04			1	3					230	3910	3910	17.00				60	2	35	2 - 5.5 mm ² THHN Copper Wire	20 mm ø Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire	
	C9	ACCU-2-05			1	4					230	5175	5175			22.50		60	2	50	2 - 8 mm ² THHN Copper Wire	25 mm ø Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire	
	C10	ACCU-2-05			1	4					230	5175	5175			22.50		60	2	50	2 - 8 mm ² THHN Copper Wire	25 mm ø Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire	
	C11	ACCU-2-06			1	4					230	5175	5175			22.50		60	2	50	2 - 8 mm ² THHN Copper Wire	25 mm ø Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire	
	C12	ACCU-2-06			1	4					230	5175	5175			22.50		60	2	50	2 - 8 mm ² THHN Copper Wire	25 mm ø Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire	
	C13	ACCU-2-07			1	4					230	5175	5175	22.50				60	2	50	2 - 8 mm ² THHN Copper Wire	25 mm ø Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire	
	C14	ACCU-2-07			1	4					230	5175	5175	22.50				60	2	50	2 - 8 mm ² THHN Copper Wire	25 mm ø Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire	
	C15	ACCU-2-08			1	2.5					230	3335	3335			14.50		60	2	30	2 - 5.5 mm ² THHN Copper Wire	20 mm ø Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire	
	C16	ACCU-2-08			1	2.5					230	3335	3335			14.50		60	2	30	2 - 5.5 mm ² THHN Copper Wire	20 mm ø Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire	
	C17	SPARE									230	1500	1500			5.22		60	2	20				
	C18	SPARE									230	1500	1500			5.22		60	2	20				
TOTAL			0	0	16	49.5	0	0	0	0	230	1500	1500	108.00	89.43	96.50	0.00							

Calculation:

For Service Conductor
 $IL = (108 + 25\% (22.5)) \times 1.732 + 0$
 196.8 A

For Service Protection
 $IL = (108 + 150\% (22.5)) \times 1.732 + 0$
 245.52 A

THEREFORE USE 250 AMPERE CIRCUIT BREAKER, 3 PHASE, 230V
 USE 3 - 125 mm² THHN COPPER, 1 - 22 mm² GROUND @ 75 mm ø Conduit - PVC

Load Type	VA	FLC			
		AB	BC	CA	3P
LO	0.00	0.00	0.00	0.00	0.00
CO	0.00	0.00	0.00	0.00	0.00
ACU	65205.00	108.00	79.00	96.50	0.00
MOTOR (NC)	0.00	0.00	0.00	0.00	0.00
MOTOR (C)	0.00	0.00	0.00	0.00	0.00
LARGEST MOTOR	0.00	0.00	0.00	0.00	0.00
SPARE	3000.00	0.00	10.43	0.00	0.00
TOTAL	68205.00	108.00	89.43	96.50	0.00

ACU PANEL BOARD 3F - SCHEDULE OF LOADS

PANEL NO.	CKT NO.	LOAD DESCRIPTION	L.O.	C.O.	OTHER LOADS	HP RATING	SWITCHES					VOLTAGE RATING	OUTLET (VA) RATING	VA PER CIRCUIT	CIRCUIT LOAD CURRENT (W/DF)				SIZE OF BREAKERS			SIZE OF HOMERUN CKT		
							S ₁	S ₂	S ₃	S _{3W}	S _{4W}				AB	BC	CA	3P	F	P	T	WIRE (sq. mm)	CONDUIT	GROUNDING
APB3	C1	ACCU-3-01			1	2.5					230	3335	3335	14.50				60	2	30	2 - 5.5 mm ² THHN Copper Wire	20 mm ø Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire	
	C2	ACCU-3-02			1	3					230	3910	3910	17.00				60	2	35	2 - 5.5 mm ² THHN Copper Wire	20 mm ø Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire	
	C3	ACCU-3-02			1	3					230	3910	3910			17.00		60	2	35	2 - 5.5 mm ² THHN Copper Wire	20 mm ø Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire	
	C4	ACCU-3-03			1	4					230	5175	5175			22.50		60	2	50	2 - 8 mm ² THHN Copper Wire	25 mm ø Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire	
	C5	ACCU-3-03			1	4					230	5175	5175			22.50		60	2	50	2 - 8 mm ² THHN Copper Wire	25 mm ø Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire	
	C6	ACCU-3-04			1	4					230	5175	5175			22.50		60	2	50	2 - 8 mm ² THHN Copper Wire	25 mm ø Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire	
	C7	ACCU-3-04			1	4					230	5175	5175	22.50				60	2	50	2 - 8 mm ² THHN Copper Wire	25 mm ø Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire	
	C8	ACCU-3-05			1	4					230	5175	5175	22.50				60	2	50	2 - 8 mm ² THHN Copper Wire	25 mm ø Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire	
	C9	ACCU-3-05			1	4					230	5175	5175			22.50		60	2	50	2 - 8 mm ² THHN Copper Wire	25 mm ø Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire	
	C10	ACCU-3-06			1	4					230	5175	5175			22.50		60	2	50	2 - 8 mm ² THHN Copper Wire	25 mm ø Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire	
	C11	ACCU-3-06			1	4					230	5175	5175			22.50		60	2	50	2 - 8 mm ² THHN Copper Wire	25 mm ø Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire	
	C12	ACCU-3-07			1	4					230	5175	5175			22.50		60	2	50	2 - 8 mm ² THHN Copper Wire	25 mm ø Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire	
	C13	ACCU-3-07			1	4					230	5175	5175	22.50				60	2	50	2 - 8 mm ² THHN Copper Wire	25 mm ø Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire	
	C14	ACCU-3-08			1	3					230	3910	3910	17.00				60	2	35	2 - 5.5 mm ² THHN Copper Wire	20 mm ø Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire	
	C15	ACCU-3-08			1	3					230	3910	3910			17.00		60	2	35	2 - 5.5 mm ² THHN Copper Wire	20 mm ø Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire	
	C16	SPARE									230	1500	1500			5.22		60	2	20				
	C17	SPARE									230	1500	1500			5.22		60	2	20				
TOTAL			0	0	15	54.5	0	0	0	0	230	1500	1500	116.00	95.22	106.72	0.00							

Calculation:

For Service Conductor
 $IL = (116 + 25\% (22.5)) \times 1.732 + 0$
 210.66 A

For Service Protection
 $IL = (116 + 150\% (22.5)) \times 1.732 + 0$
 259.37 A

THEREFORE USE 275 AMPERE CIRCUIT BREAKER, 3 PHASE, 230V
 USE 3 - 125 mm² THHN COPPER, 1 - 22 mm² GROUND @ 75 mm ø Conduit - PVC

Load Type	VA	FLC			
		AB	BC	CA	3P
LO	0.00	0.00	0.00	0.00	0.00
CO	0.00	0.00	0.00	0.00	0.00
ACU	70725.00	116.00	90.00	101.50	0.00
MOTOR (NC)	0.00	0.00	0.00	0.00	0.00
MOTOR (C)	0.00	0.00	0.00	0.00	0.00
LARGEST MOTOR	0.00	0.00	0.00	0.00	0.00
SPARE	3000.00	0.00	5.22	5.22	0.00
TOTAL	73725.00	116.00	95.22	106.72	0.00



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 WEBSITE: www.ustp.edu.ph

PROFESSIONAL ELECTRICAL ENGINEER

PROJECT
 LOCATION
 OWNER

PROPOSED CONSTRUCTION OF SMART ACADEMIC BUILDING
 PHASE 1, JASAAN CAMPUS
 USTP JASAAN CAMPUS, MISAMIS ORIENTAL
 UNIVERSITY OF SCIENCE AND TECHNOLOGY OF SOUTHERN PHILIPPINES

RECOMMENDING APPROVAL:

ENGR. GRACE C. BABA

DIRECTOR, INFRASTRUCTURE PLANNING & FACILITIES DEVELOPMENT OFFICE

RECOMMENDING APPROVAL:

ATTY. ERWIN B. BUENO

VP FOR ADMINISTRATION & LEGAL AFFAIRS

APPROVED BY:

DR. AMBROSIO B. CULTURA II

PRESIDENT, USTP SYSTEM

SHEET CONTENTS:

SCHEDULE OF LOADS

DRAWN BY:

DATE DRAWN:

10.01.2025

FNT:

E19

ACU PANEL BOARD 4F - SCHEDULE OF LOADS

PANEL NO.	CKT NO.	LOAD DESCRIPTION	L.O.	C.O.	OTHER LOADS	HP RATING	SWITCHES					VOLTAGE RATING	OUTLET (VA) RATING	VA PER CIRCUIT	CIRCUIT LOAD CURRENT (W/DF)				SIZE OF BREAKERS			SIZE OF HOMERUN CKT		
							S ₁	S ₂	S ₃	S _{3W}	S _{4W}				AB	BC	CA	3P	F	P	T	WIRE (sq. mm)	CONDUIT	GROUNDING
APB4	C1	ACCU-4-01			1	2.5					230	3335	3335	14.50				60	2	30	2 - 5.5 mm ² THHN Copper Wire	20 mm ϕ Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire	
	C2	ACCU-4-02			1	3					230	3910	3910	17.00				60	2	35	2 - 5.5 mm ² THHN Copper Wire	20 mm ϕ Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire	
	C3	ACCU-4-02			1	3					230	3910	3910			17.00		60	2	35	2 - 5.5 mm ² THHN Copper Wire	20 mm ϕ Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire	
	C4	ACCU-4-03			1	4					230	5175	5175			22.50		60	2	50	2 - 8 mm ² THHN Copper Wire	25 mm ϕ Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire	
	C5	ACCU-4-03			1	4					230	5175	5175			22.50		60	2	50	2 - 8 mm ² THHN Copper Wire	25 mm ϕ Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire	
	C6	ACCU-4-04			1	4					230	5175	5175			22.50		60	2	50	2 - 8 mm ² THHN Copper Wire	25 mm ϕ Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire	
	C7	ACCU-4-04			1	4					230	5175	5175	22.50				60	2	50	2 - 8 mm ² THHN Copper Wire	25 mm ϕ Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire	
	C8	ACCU-4-05			1	4					230	5175	5175	22.50				60	2	50	2 - 8 mm ² THHN Copper Wire	25 mm ϕ Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire	
	C9	ACCU-4-05			1	4					230	5175	5175			22.50		60	2	50	2 - 8 mm ² THHN Copper Wire	25 mm ϕ Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire	
	C10	ACCU-4-06			1	4					230	5175	5175			22.50		60	2	50	2 - 8 mm ² THHN Copper Wire	25 mm ϕ Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire	
	C11	ACCU-4-06			1	4					230	5175	5175			22.50		60	2	50	2 - 8 mm ² THHN Copper Wire	25 mm ϕ Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire	
	C12	ACCU-4-07			1	4					230	5175	5175			22.50		60	2	50	2 - 8 mm ² THHN Copper Wire	25 mm ϕ Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire	
	C13	ACCU-4-07			1	4					230	5175	5175	22.50				60	2	50	2 - 8 mm ² THHN Copper Wire	25 mm ϕ Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire	
	C14	ACCU-4-08			1	3					230	3910	3910	17.00				60	2	35	2 - 5.5 mm ² THHN Copper Wire	20 mm ϕ Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire	
	C15	ACCU-4-08			1	3					230	3910	3910			17.00		60	2	35	2 - 5.5 mm ² THHN Copper Wire	20 mm ϕ Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire	
	C16	SPARE									230	1500	1500			5.22		60	2	20				
	C17	SPARE									230	1500	1500			5.22		60	2	20				
TOTAL			0	0	15	54.5	0	0	0	0	230	1500	1500	73725	116.00	95.22	106.72	0.00	60	2	20			

Calculation:

For Service Conductor
IL = (116 + 25% (22.5)) x 1.732 + 0
210.66 A

For Service Protection
IL = (116 + 150% (22.5)) x 1.732 + 0
259.37 A

THEREFORE USE 275 AMPERE CIRCUIT BREAKER, 3 PHASE, 230V
USE 3 - 125 mm² THHN COPPER, 1 - 22 mm² GROUND @ 75 mm ϕ Conduit - PVC

Load Type	VA	FLC			
		AB	BC	CA	3P
LD	0.00	0.00	0.00	0.00	0.00
CO	0.00	0.00	0.00	0.00	0.00
ACU	70725.00	116.00	90.00	101.50	0.00
MOTOR (NC)	0.00	0.00	0.00	0.00	0.00
MOTOR (C)	0.00	0.00	0.00	0.00	0.00
LARGEST MOTOR	0.00	0.00	0.00	0.00	0.00
SPARE	3000.00	0.00	5.22	5.22	0.00
TOTAL	73725.00	116.00	95.22	106.72	0.00

ACU PANEL BOARD 5F - SCHEDULE OF LOADS

PANEL NO.	CKT NO.	LOAD DESCRIPTION	L.O.	C.O.	OTHER LOADS	HP RATING	SWITCHES					VOLTAGE RATING	OUTLET (VA) RATING	VA PER CIRCUIT	CIRCUIT LOAD CURRENT (W/DF)				SIZE OF BREAKERS			SIZE OF HOMERUN CKT		
							S ₁	S ₂	S ₃	S _{3W}	S _{4W}				AB	BC	CA	3P	F	P	T	WIRE (sq. mm)	CONDUIT	GROUNDING
APB5	C1	ACCU-5-01			1	4					230	5175	5175	22.50				60	2	50	2 - 8 mm ² THHN Copper Wire	25 mm ϕ Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire	
	C2	ACCU-5-02			1	4					230	5175	5175	22.50				60	2	50	2 - 8 mm ² THHN Copper Wire	25 mm ϕ Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire	
	C3	ACCU-5-02			1	4					230	5175	5175			22.50		60	2	50	2 - 8 mm ² THHN Copper Wire	25 mm ϕ Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire	
	C4	ACCU-5-03			1	4					230	5175	5175			22.50		60	2	50	2 - 8 mm ² THHN Copper Wire	25 mm ϕ Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire	
	C5	ACCU-5-03			1	4					230	5175	5175			22.50		60	2	50	2 - 8 mm ² THHN Copper Wire	25 mm ϕ Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire	
	C6	ACCU-5-04			1	1.5					230	2300	2300			10.00		60	2	20	2 - 5.5 mm ² THHN Copper Wire	20 mm ϕ Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire	
	C7	ACCU-5-05			1	6					230	7139	7139			17.92		60	3	40	3 - 8 mm ² THHN Copper Wire	32 mm ϕ Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire	
	C8	ACCU-5-05			1	6					230	7139	7139			17.92		60	3	40	3 - 8 mm ² THHN Copper Wire	32 mm ϕ Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire	
	C9	ACCU-5-05			1	6					230	7139	7139			17.92		60	3	40	3 - 8 mm ² THHN Copper Wire	32 mm ϕ Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire	
	C10	ACCU-5-05			1	6					230	7139	7139			17.92		60	3	40	3 - 8 mm ² THHN Copper Wire	32 mm ϕ Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire	
	C11	ACCU-5-06			1	3					230	3910	3910	17.00				60	2	35	2 - 5.5 mm ² THHN Copper Wire	20 mm ϕ Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire	
	C12	ACCU-5-05			1	6					230	7139	7139			17.92		60	3	40	3 - 8 mm ² THHN Copper Wire	32 mm ϕ Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire	
	C13	ACCU-5-07			1	3					230	3910	3910	17.00				60	2	35	2 - 5.5 mm ² THHN Copper Wire	20 mm ϕ Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire	
	C14	ACCU-5-07			1	3					230	3910	3910			17.00		60	2	35	2 - 5.5 mm ² THHN Copper Wire	20 mm ϕ Conduit - PVC	1 - 5.5 mm ² THHN Copper Wire	
	C15	SPARE									230	1500	1500			5.22		60	2	20				
	C16	SPARE									230	1500	1500			5.22		60	2	20				
TOTAL			0	0	14	60.5	0	0	0	0	230	1500	1500	78598	79.00	37.72	67.22	89.60	60	2	20			

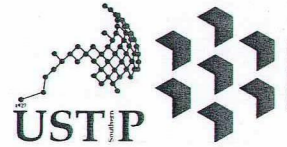
Calculation:

For Service Conductor
IL = (79 + 25% (22.5)) x 1.732 + 89.6
236.17 A

For Service Protection
IL = (79 + 150% (22.5)) x 1.732 + 89.6
284.89 A

THEREFORE USE 300 AMPERE CIRCUIT BREAKER, 3 PHASE, 230V
USE 3 - 125 mm² THHN COPPER, 1 - 22 mm² GROUND @ 75 mm ϕ Conduit - PVC

Load Type	VA	FLC			
		AB	BC	CA	3P
LD	0.00	0.00	0.00	0.00	0.00
CO	0.00	0.00	0.00	0.00	0.00
ACU	75598.06	79.00	32.50	62.00	89.60
MOTOR (NC)	0.00	0.00	0.00	0.00	0.00
MOTOR (C)	0.00	0.00	0.00	0.00	0.00
LARGEST MOTOR	0.00	0.00	0.00	0.00	0.00
SPARE	3000.00	0.00	5.22	5.22	0.00
TOTAL	78598.06	79.00	37.72	67.22	89.60



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INFRASTRUCTURE PLANNING AND FACILITY DEVELOPMENT UNIT
CLARO M. RECTO AVENUE, LAPASAN, CAGAYAN DE ORO CITY 9000
TELEPHONE # (0882) 72-60-65 / (088) 856-1738 / 856-1739 | TELE FAX (088) 856-4696
WEBSITE: www.ustp.edu.ph

PROFESSIONAL ELECTRICAL ENGINEER

PROJECT: PROPOSED CONSTRUCTION OF SMART ACADEMIC BUILDING PHASE 1, JASAAAN CAMPUS
LOCATION: USTP JASAAAN CAMPUS, MISAMIS ORIENTAL
OWNER: UNIVERSITY OF SCIENCE AND TECHNOLOGY OF SOUTHERN PHILIPPINES

RECOMMENDING APPROVAL:
ENGR. GRACE C. BABA
DIRECTOR, INFRASTRUCTURE PLANNING & FACILITIES DEVELOPMENT OFFICE

RECOMMENDING APPROVAL:
ATTY. ERWIN B. BULITO
VP FOR ADMINISTRATION & LEGAL AFFAIRS

APPROVED BY:
DR. AMBRISIO B. CULTURA II
PRESIDENT, USTP SYSTEM

SHEET CONTENTS:
SCHEDULE OF LOADS

DRAWN BY:
DATE DRAWN:
10.01.2025
FNT:



TRANSFORMER TO MCB	
LENGTH	5 m
FLC	1582.90 A
SETS	5
PHASE	3
FACTOR	1.732
CABLE	
250mm ²	
RESISTANCE	0.029 Ω
REACTANCE	0.048 Ω
COMPUTATION	$VD = [1.732 \times (1582.9/5) \times \sqrt{(0.029^2 + 0.048^2)}] / 305m \times 5m$
VOLTAGE DROP	0.504093394 V

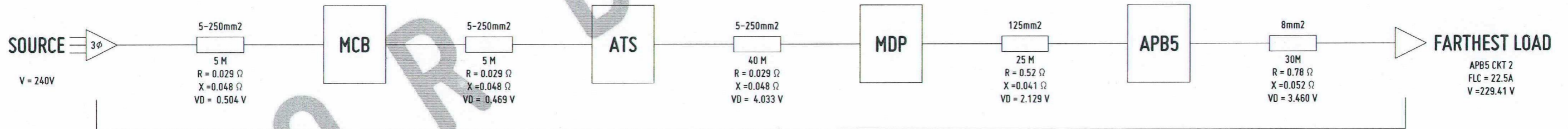
MCB TO ATS	
LENGTH	5 m
FLC	1472.24 A
SETS	5
PHASE	3
FACTOR	1.732
CABLE	
250mm ²	
RESISTANCE	0.029 Ω
REACTANCE	0.048 Ω
COMPUTATION	$VD = [1.732 \times (1472.24/5) \times \sqrt{(0.029^2 + 0.048^2)}] / 305m \times 5m$
VOLTAGE DROP	0.468852493 V

ATS TO MDP	
LENGTH	40 m
FLC	1582.90 A
SETS	5
PHASE	3
FACTOR	1.732
CABLE	
250mm ²	
RESISTANCE	0.029 Ω
REACTANCE	0.048 Ω
COMPUTATION	$VD = [1.732 \times (1582.9/5) \times \sqrt{(0.029^2 + 0.048^2)}] / 305m \times 40m$
VOLTAGE DROP	4.032747155 V

MDP TO APB5	
LENGTH	25 m
FLC	226.43 A
SETS	1
PHASE	3
FACTOR	1.732
CABLE	
125mm ²	
RESISTANCE	0.052 Ω
REACTANCE	0.041 Ω
COMPUTATION	$VD = [1.732 \times (226.43/1) \times \sqrt{(0.052^2 + 0.041^2)}] / 305m \times 25m$
VOLTAGE DROP	2.128643762 V

APB5 TO FARTHEST MOTOR LOAD (CKT 2)	
LENGTH	30 m
FLC	22.50 A
SETS	1
PHASE	1
FACTOR	2
CABLE	
8mm ²	
RESISTANCE	0.78 Ω
REACTANCE	0.052 Ω
COMPUTATION	$VD = [2 \times (22.5/1) \times \sqrt{(0.78^2 + 0.052^2)}] / 305m \times 30m$
VOLTAGE DROP	3.460122642 V

VOLTAGE DROP ANALYSIS			
TOTAL VOLTAGE DROP FROM SERVICE TO FARTHEST LOAD	$0.5 + 0.47 + 4.03 + 2.13 + 3.46$	10.59 V	PERCENT VOLTAGE DROP
VOLTAGE DROP COMPUTATION USING NOMINAL VOLTAGE (240V)	$240 - 10.59 V$	229.41V	4.41%



10.59V OR 4.41%



VOLTAGE DROP ANALYSIS

DRAWN NOT TO SCALE



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TELEPHONE # (08822) 72-60-65 / (088) 856-1738 / 856-1739 | TELE FAX (088) 856-4496
WEBSITE: www.ustp.edu.ph

PROFESSIONAL ELECTRICAL ENGINEER

PROJECT: PROPOSED CONSTRUCTION OF SMART ACADEMIC BUILDING PHASE 1, JASAAN CAMPUS
LOCATION: USTP JASAAN CAMPUS, MISAMIS ORIENTAL
OWNER: UNIVERSITY OF SCIENCE AND TECHNOLOGY OF SOUTHERN PHILIPPINES

RECOMMENDING APPROVAL:
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RECOMMENDING APPROVAL:
ATTY. ERWIN B. BUCIO
VP FOR ADMINISTRATION & LEGAL AFFAIRS

APPROVED BY:
DR. AMBROSIO B. CULTURA II
PRESIDENT, USTP SYSTEM

SHEET CONTENTS:
VOLTAGE DROP ANALYSIS

DRAWN BY:
DATE DRAWN:
10.01.2025
PNT:



USING POINT TO POINT METHOD

Transformer Full Load Current (I_{FLA})
 For 3Ø Transformer:
 $I_{FLA} = (kVA \times 1000) / (E_{L-L} \times \sqrt{3})$
 For 1Ø Transformer:
 $I_{FLA} = (kVA \times 1000) / E_{L-L}$

1. For 3Ø System:
 $f = (1.732 \times L \times I_{3\phi}) / (C \times n \times E_{L-L})$

2. For Line-to-Line:
 $f = (2 \times L \times I_{L-L}) / (C \times n \times E_{L-L})$

3. For Line-to-Neutral: $f = (2 \times L \times I_{L-N}) / (C \times n \times E_{L-N})$

Multiplier = $100 / (\%Z_{transformer})$
 $M = 1 / (1 + f)$
 $I_{S.C. sym. RMS} = I_{S.C.} \times M$
 $I_{S.C. Motor Contribution} = I_{S.C.} \times 4$

FAULT LOCATION 1	
XMER SECONDARY SIDE	
TRANSFORMER FLC	7403.290993 A
MULTIPLIER	23.14814815
3P FAULT CURRENT	55631.73595 A
	55.63173595 kA
TOTAL 3P FAULT CURRENT	62553.01539 A
	62.55301539 kA

FAULT LOCATION 2	
MCB	
CONDUCTOR	250mm ²
NO. OF SETS	5
LENGTH	5 m
C VALUE	22185
"F" FACTOR	0.059372435
MULTIPLIER	0.943955088
3P FAULT CURRENT	52513.86018 A
	52.51386018 kA
TOTAL 3P FAULT CURRENT	59435.13963 A
	59.43513963 kA

FAULT LOCATION 3	
ATS	
CONDUCTOR	250mm ²
NO. OF SETS	5
LENGTH	5 m
C VALUE	22185
"F" FACTOR	0.059372435
MULTIPLIER	0.943955088
3P FAULT CURRENT	49570.72549 A
	49.57072549 kA
TOTAL 3P FAULT CURRENT	56492.00494 A
	56.49200494 kA

FAULT LOCATION 4	
MDP	
CONDUCTOR	250mm ²
NO. OF SETS	5
LENGTH	40 m
C VALUE	22185
"F" FACTOR	0.474979462
MULTIPLIER	0.677975532
3P FAULT CURRENT	33607.73901 A
	33.60773901 kA
TOTAL 3P FAULT CURRENT	40529.01845 A
	40.52901845 kA

FAULT LOCATION 5	
SPB	
CONDUCTOR	30mm ²
NO. OF SETS	1
LENGTH	20 m
C VALUE	5907
"F" FACTOR	4.459717207
MULTIPLIER	0.16315967
3P FAULT CURRENT	9079.357705 A
	9.079357705 kA
TOTAL 3P FAULT CURRENT	16000.63715 A
	16.00063715 kA

FAULT LOCATION 6	
FIRE PUMP	
CONDUCTOR	38mm ²
NO. OF SETS	1
LENGTH	20 m
C VALUE	7293
"F" FACTOR	3.612169141
MULTIPLIER	0.215817721
3P FAULT CURRENT	10747.81171 A
	10.74781171 kA
TOTAL 3P FAULT CURRENT	6932.027255 A
	6.932027255 kA

TRANSFORMER RATING	999	kVA
%Z	4.8	(Typical Value)
PRIMARY LINE VOLTAGE	13.2	kV
SECONDARY LINE VOLTAGE	240	V

MOTOR LOADS		
TYPE	FLC	SHORT CIRCUIT CURRENT CONTRIBUTION (kA)
AIRCON	1523.69	6.09
MOTOR (NON CONTINUOUS)	50.75	0.20
MOTOR (CONTINUOUS)	38.10	0.15
LARGEST MOTOR	117.78	0.47
TOTAL MOTOR CONTRIBUTION		6.92

GENERATOR						
RATING		PF	VOLTAGE	FLC	SUBTRANSIENT REACTANCE (X ["])	SHORT CIRCUIT CURRENT CONTRIBUTION (kA)
kVA	kW					
800	640	0.8	240	1924.557352	25%	7.70

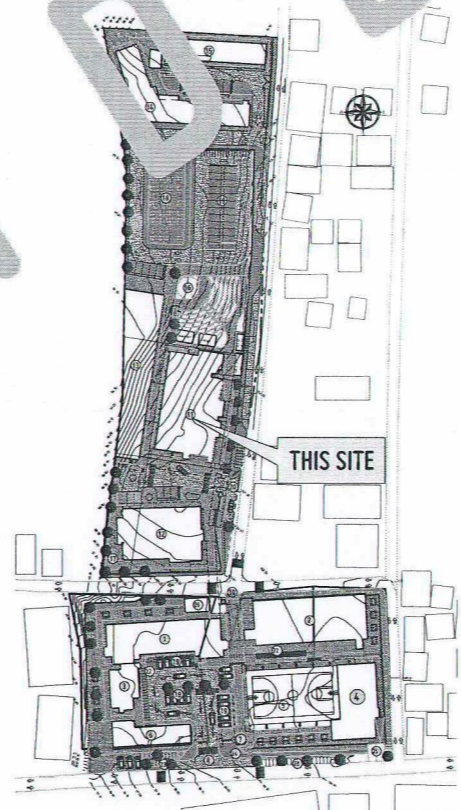
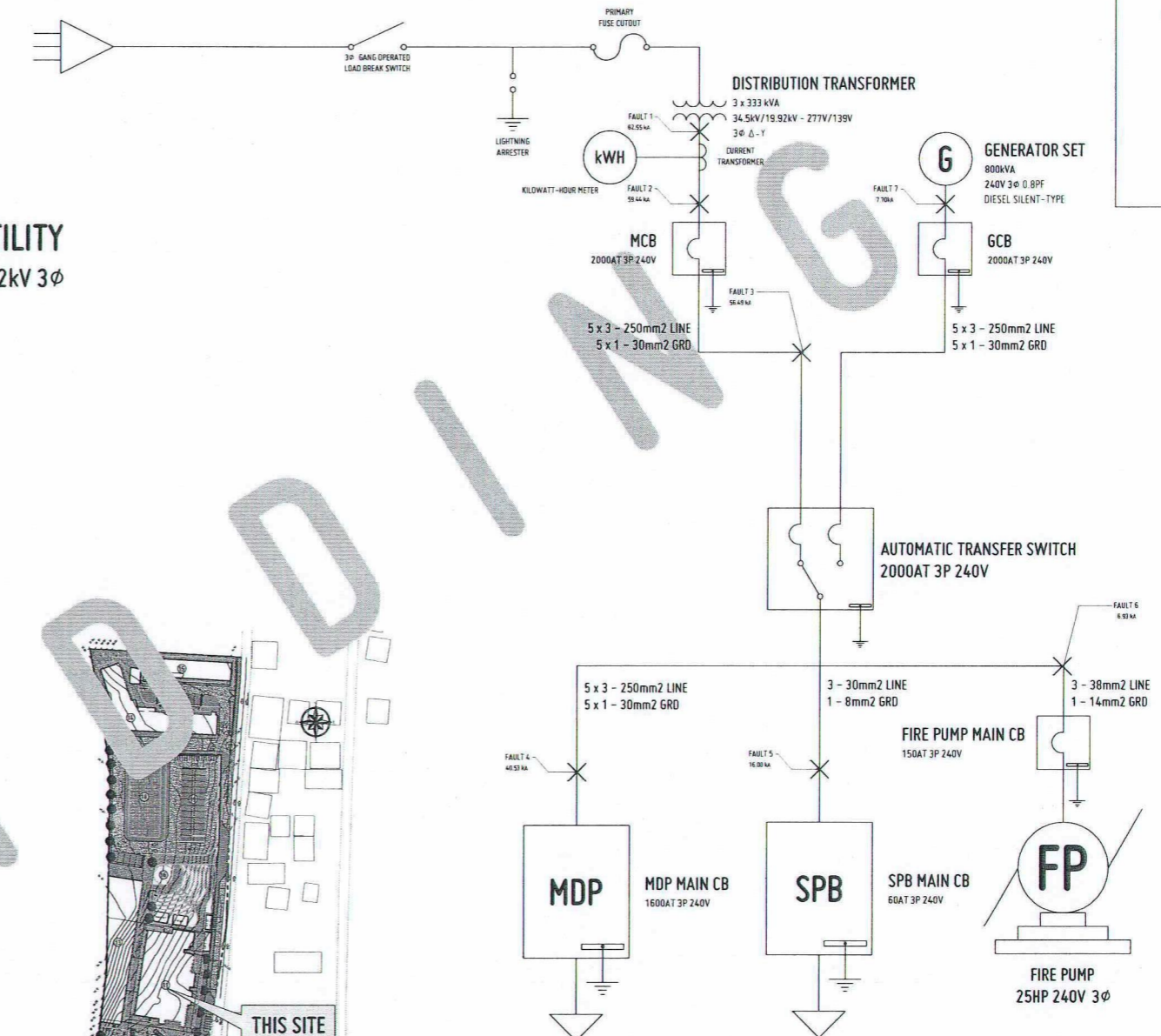
SHORT CIRCUIT ANALYSIS			
FAULT NO.	FAULT LOCATION	TOTAL 3P FAULT CURRENT (kA)	MINIMUM CB KAIC RATING
1	XMER SECONDARY SIDE	62.55	65
2	MCB	59.44	65
3	ATS	56.49	65
4	MDP	40.53	42
5	SPB	16.00	18
6	FIRE PUMP	6.93	10

SHORT CIRCUIT ANALYSIS

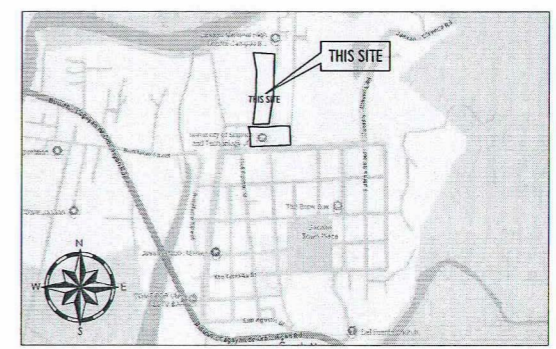
22 1
DRAWN NOT TO SCALE

DISTRIBUTION UTILITY

13.2kV 3Ø



22 2
LOCATION PLAN
SCALE: 1:1500 MTS



22 2
VICINITY MAP
SCALE: NTS



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CAGAYAN DE ORO CAMPUS
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CLARO M. RECTO AVENUE, LAPASAN, CAGAYAN DE ORO CITY 9000
TELEPHONE # (08822) 72-60-65 / (088) 856-1736 / 856-1739 | TELE FAX (088) 856-4496
WEBSITE: www.ustp.edu.ph

PROFESSIONAL ELECTRICAL ENGINEER

PROJECT: PROPOSED CONSTRUCTION OF SMART ACADEMIC BUILDING PHASE 1, JASAAN CAMPUS
 LOCATION: USTP JASAAN CAMPUS, MISAMIS ORIENTAL
 OWNER: UNIVERSITY OF SCIENCE AND TECHNOLOGY OF SOUTHERN PHILIPPINES

RECOMMENDING APPROVAL:
 ENGR. GRACE C. BABA
 DIRECTOR, INFRASTRUCTURE PLANNING & FACILITIES DEVELOPMENT OFFICE

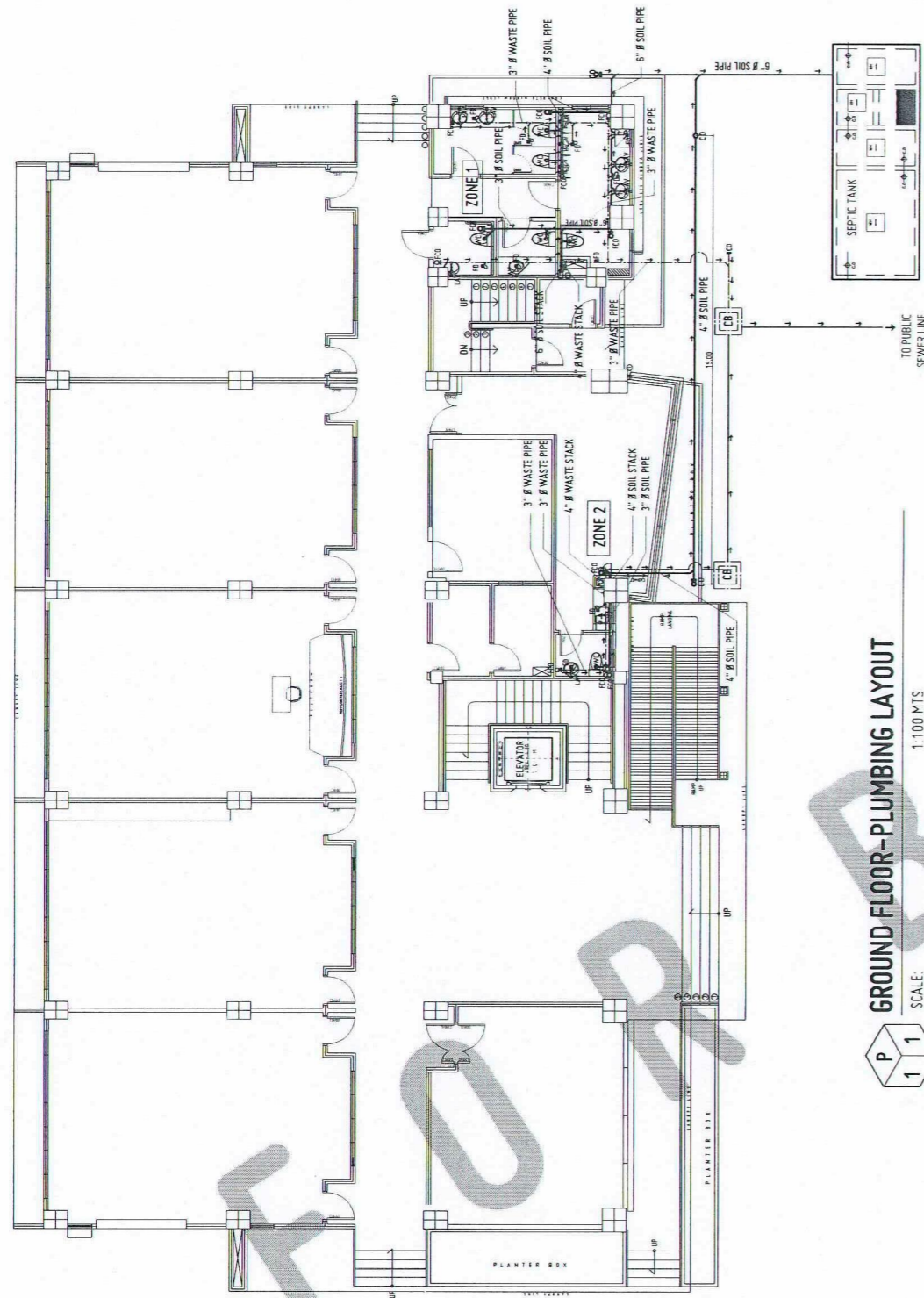
RECOMMENDING APPROVAL:
 ATTY. ERWIN B. BUEN
 VP FOR ADMINISTRATION & LEGAL AFFAIRS

APPROVED BY:
 DR. AMBRASO B. CULTURA II
 PRESIDENT, USTP SYSTEM

SHEET CONTENTS:
 SHORT CIRCUIT ANALYSIS

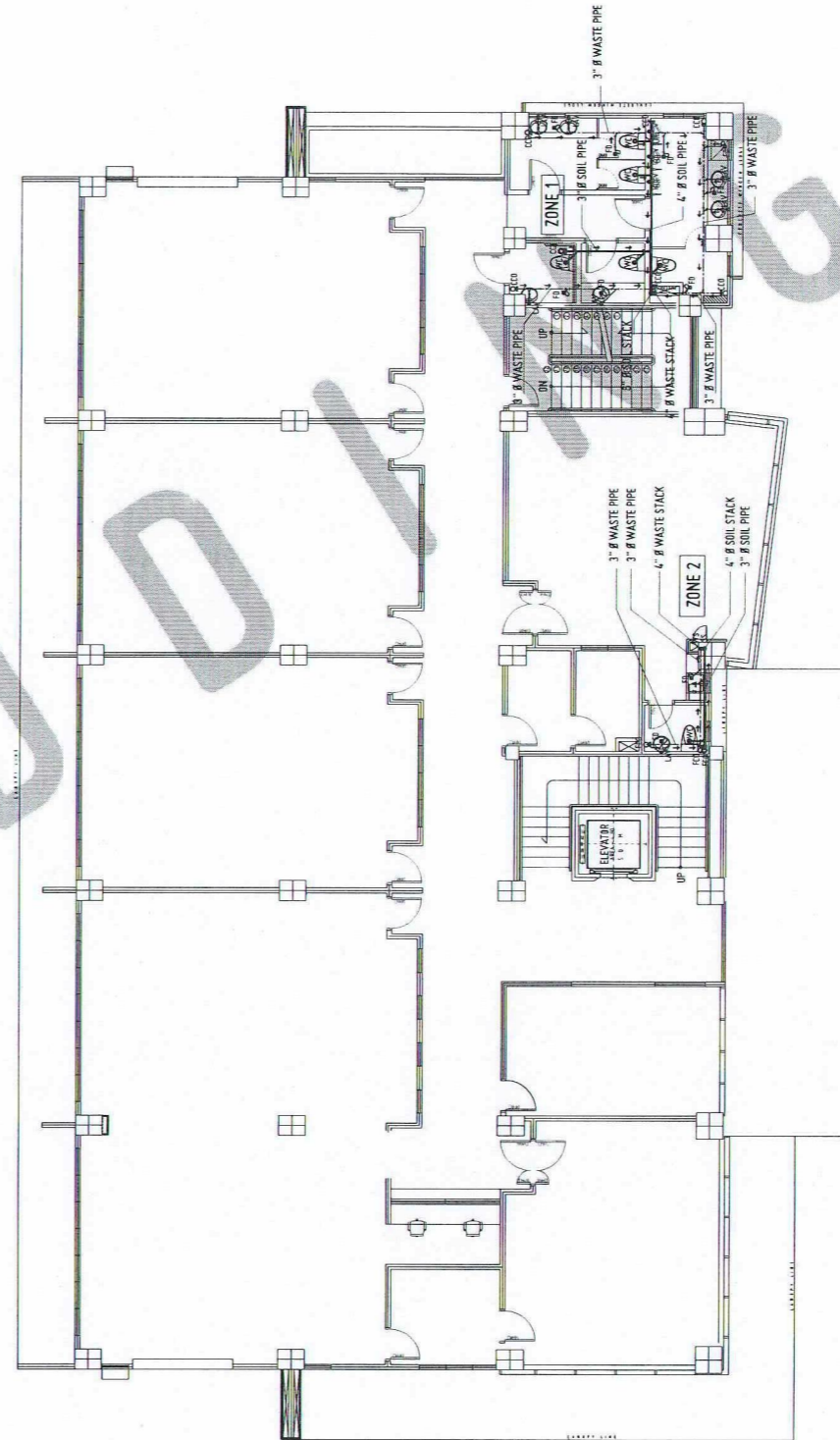
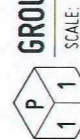
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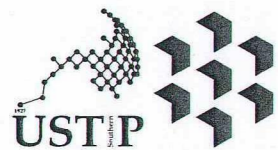
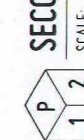
GROUND FLOOR-PLUMBING LAYOUT

SCALE: 1:100 MTS



SECOND FLOOR-PLUMBING LAYOUT

SCALE: 1:100 MTS



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CLARIO M. RECTO AVENUE, LAPASAN, CAGAYAN DE ORO CITY 9000
TELEPHONE # (08822) 72-60-65 / (088) 856-1738 / 856-1739 | TELE FAX (088) 856-4696
WEBSITE: www.ustp.edu.ph

MASTER PLUMBER

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LOCATION	USTP JASAAN CAMPUS, MISAMIS ORIENTAL
OWNER	UNIVERSITY OF SCIENCE AND TECHNOLOGY OF SOUTHERN PHILIPPINES

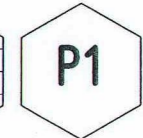
RECOMMENDING APPROVAL:	ENGR. GRACE C. BABA DIRECTOR, INFRASTRUCTURE PLANNING & FACILITIES DEVELOPMENT OFFICE
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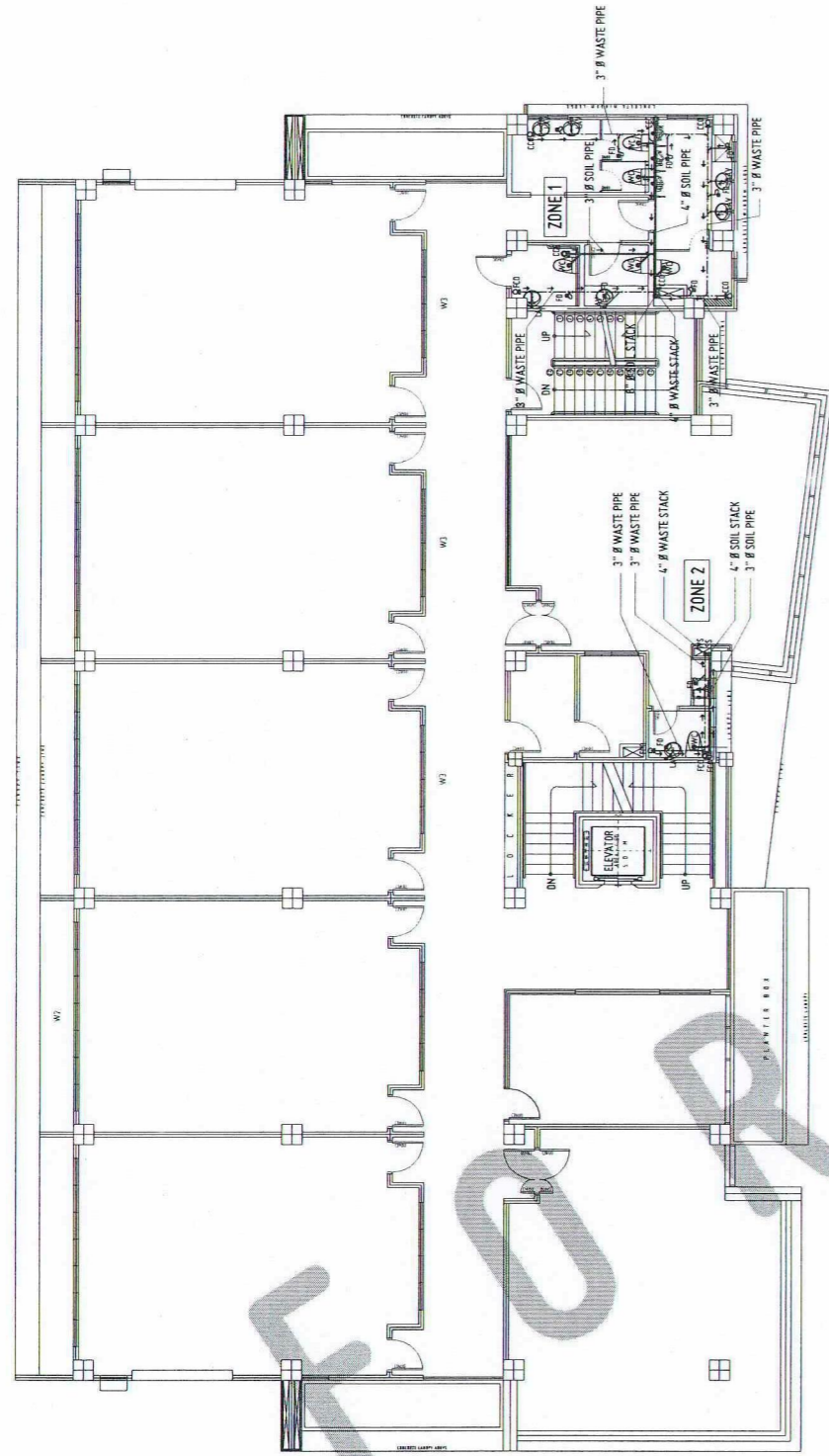
RECOMMENDING APPROVAL:	ATTY. ERWIN B. BUELO VP FOR ADMINISTRATION & LEGAL AFFAIRS
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APPROVED BY:	DR. AMBROSIO B. CULTURA II PRESIDENT, USTP SYSTEM
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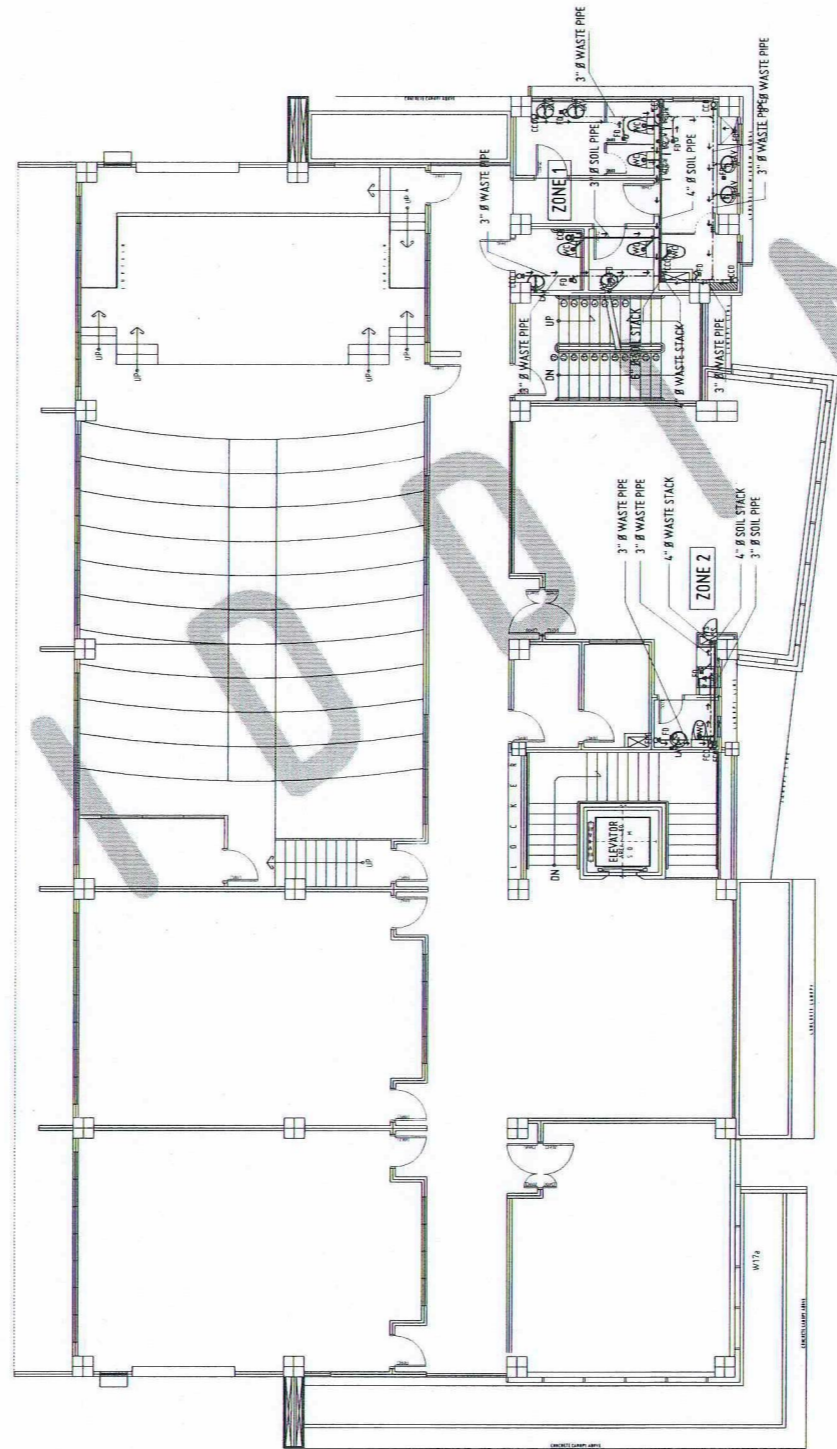
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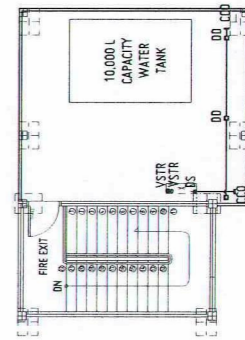




TYPICAL FLOOR-PLUMBING LAYOUT
THIRD FLOOR & FOURTH FLOOR
SCALE: 1:100 MTS



FIFTH FLOOR-PLUMBING LAYOUT
SCALE: 1:100 MTS



ROOF DECK PLAN
SCALE: 1:100 MTS



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TELEPHONE # (08822) 72-60-65 / (088) 856-1736 / 856-1739 | TELE FAX (088) 856-4896
WEBSITE: www.ustp.edu.ph

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OWNER	UNIVERSITY OF SCIENCE AND TECHNOLOGY OF SOUTHERN PHILIPPINES

RECOMMENDING APPROVAL:	<i>Grace C. Bala</i>
ENGR. GRACE C. BALA	
DIRECTOR, INFRASTRUCTURE PLANNING & FACILITIES DEVELOPMENT OFFICE	

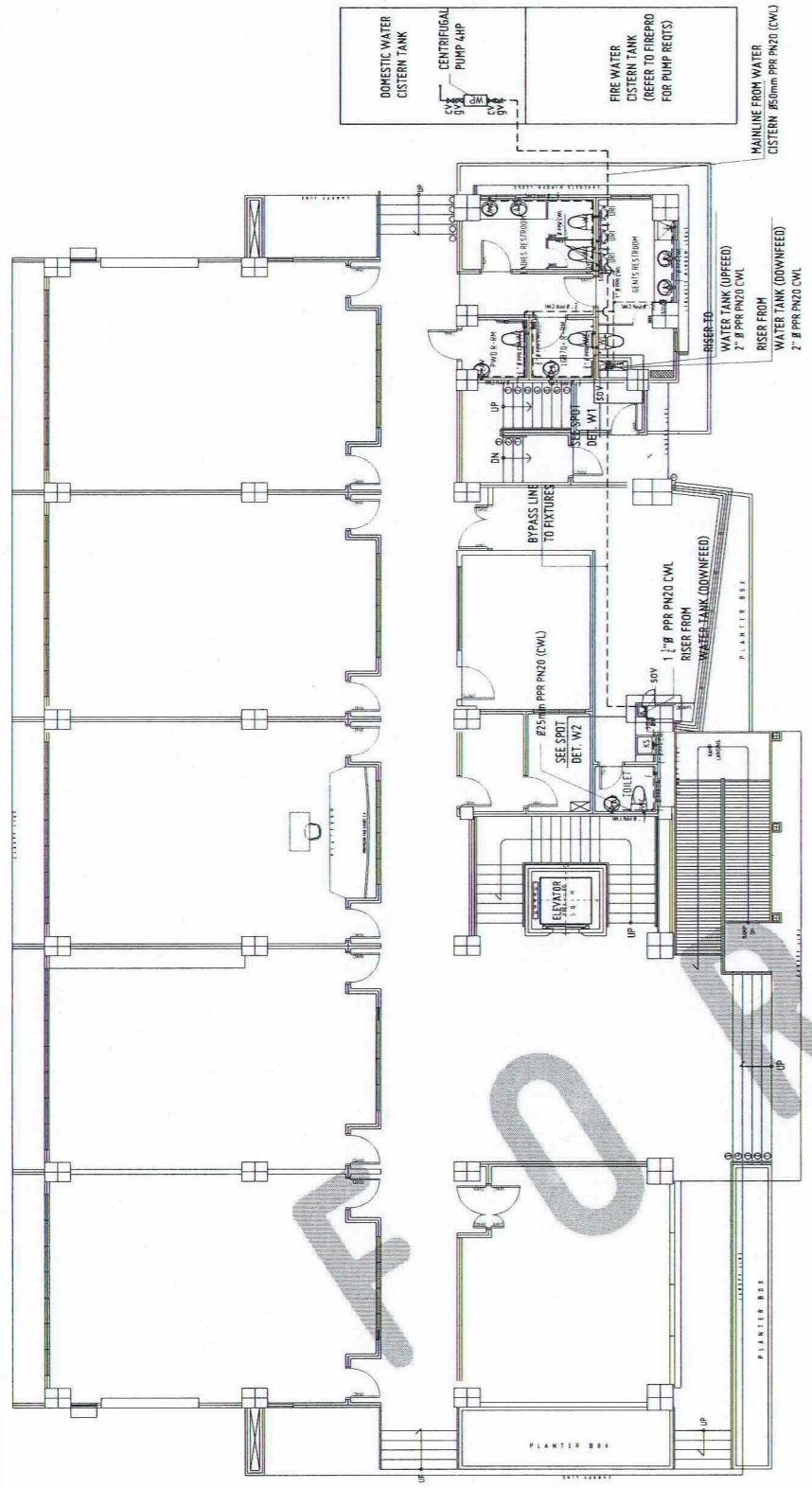
RECOMMENDING APPROVAL:	<i>Erwin B. Bucio</i>
ATTY. ERWIN B. BUCIO	
VP FOR ADMINISTRATION & LEGAL AFFAIRS	

APPROVED BY:	<i>Ambrosio S. Cultura II</i>
DR. AMBROSIO S. CULTURA II	
PRESIDENT, USTP SYSTEM	

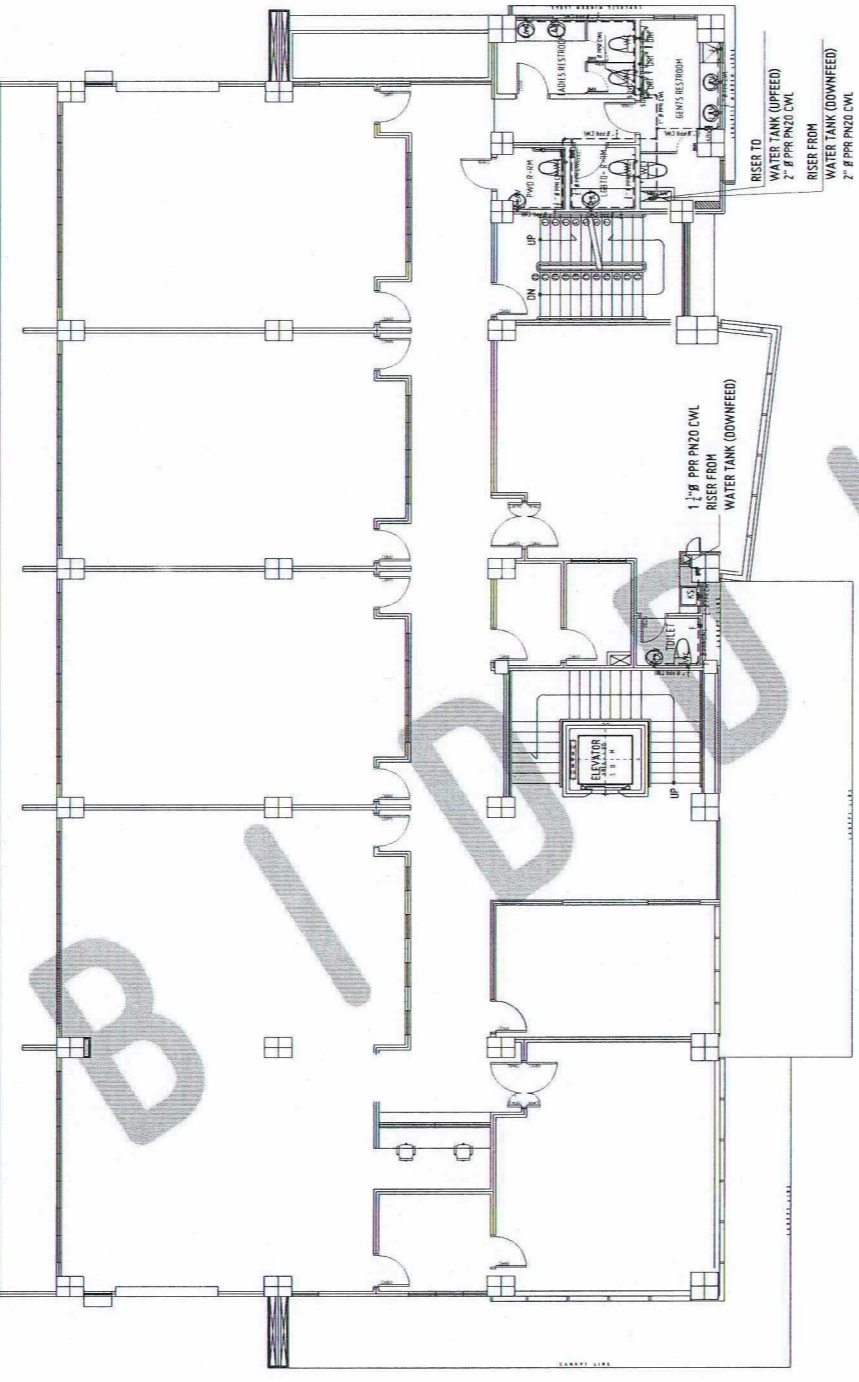
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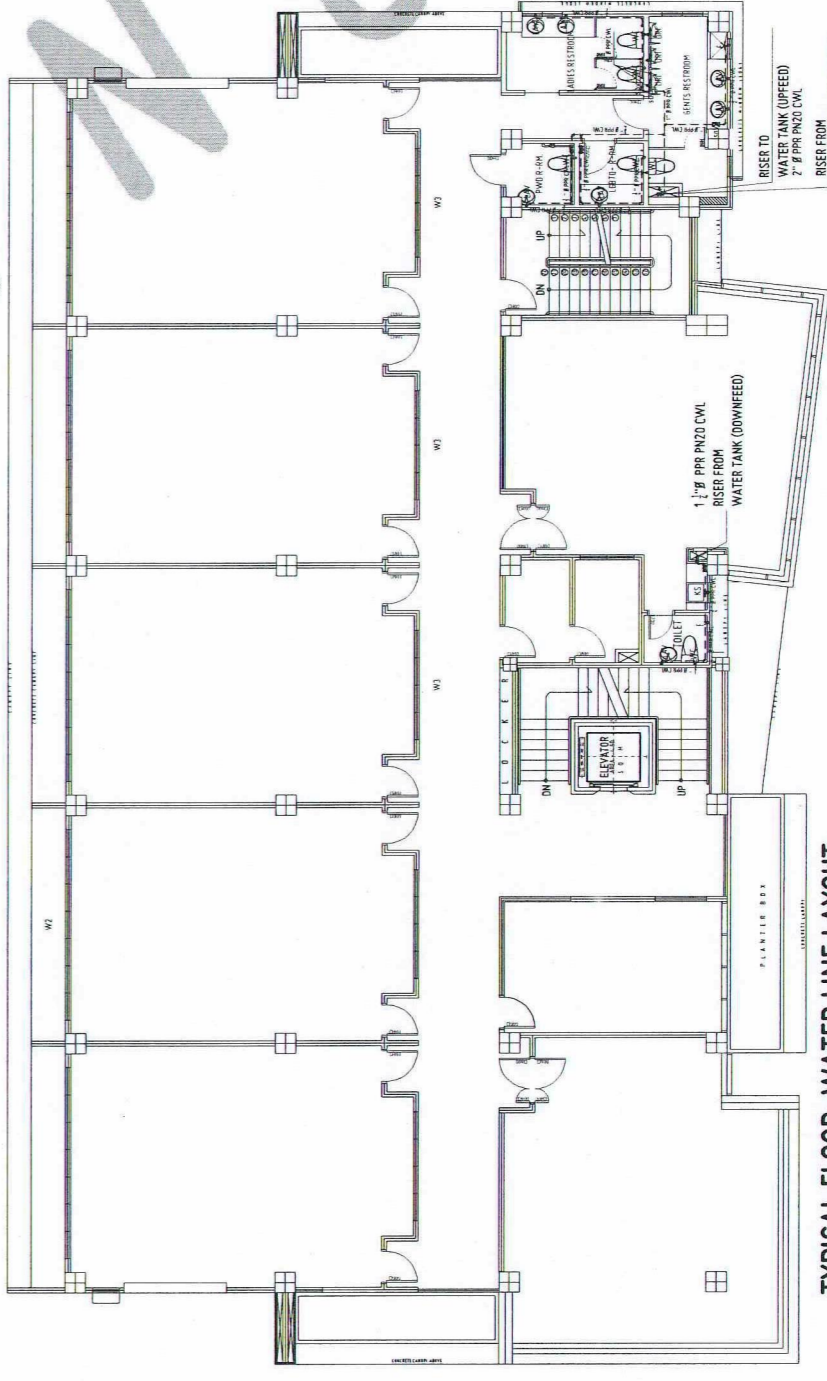




GROUND FLOOR - WATER LINE LAYOUT
SCALE: 1:100 MTS



SECOND FLOOR - WATER LINE LAYOUT
SCALE: 1:100 MTS



TYPICAL FLOOR - WATER LINE LAYOUT
THIRD FLOOR & FOURTH FLOOR
SCALE: 1:100 MTS



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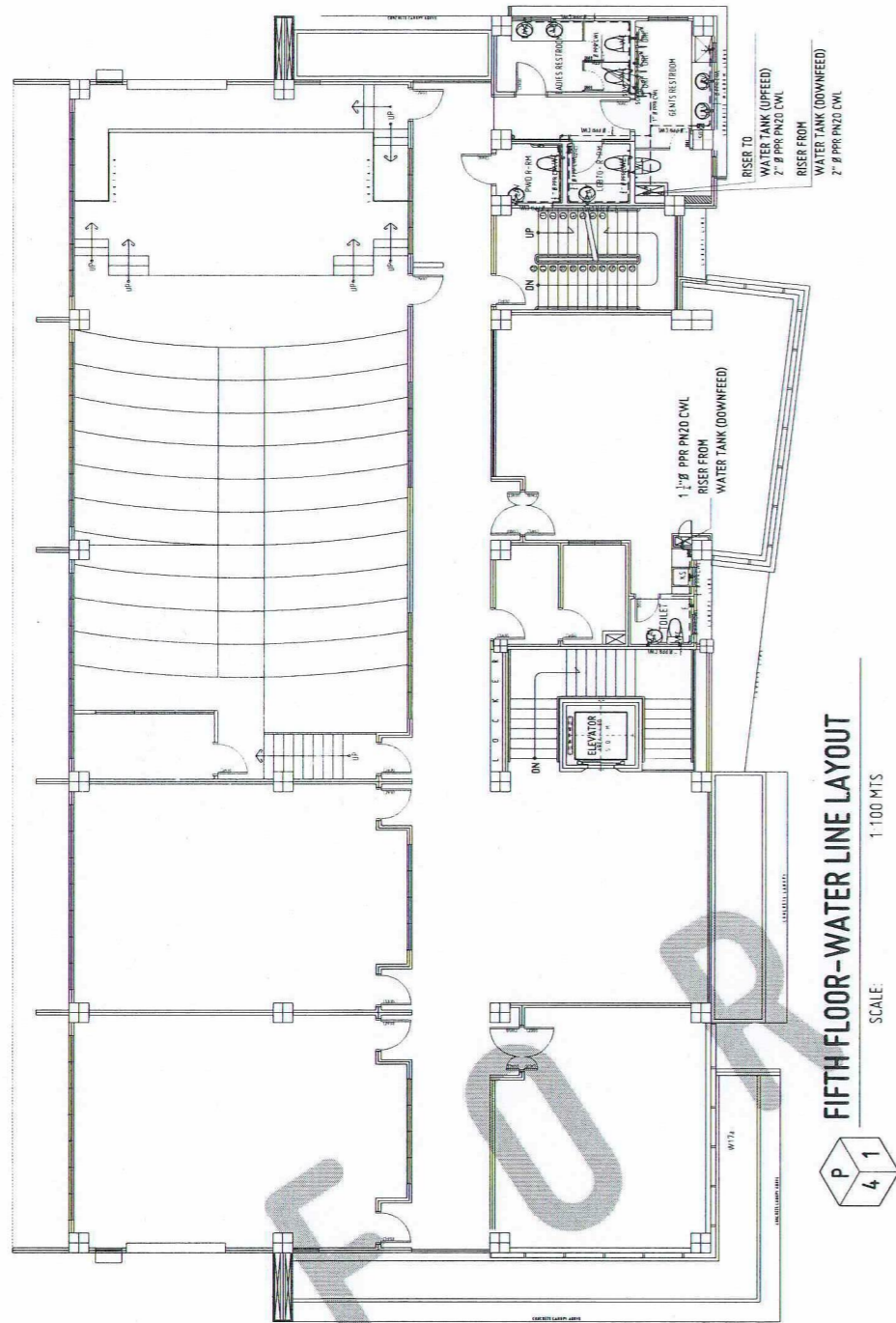
RECOMMENDING APPROVAL:	ATTY. ERWIN B. BUCIO VP FOR ADMINISTRATION & LEGAL AFFAIRS
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APPROVED BY:	DR. AMBASSOR B. CULTURA II PRESIDENT, USTP SYSTEM
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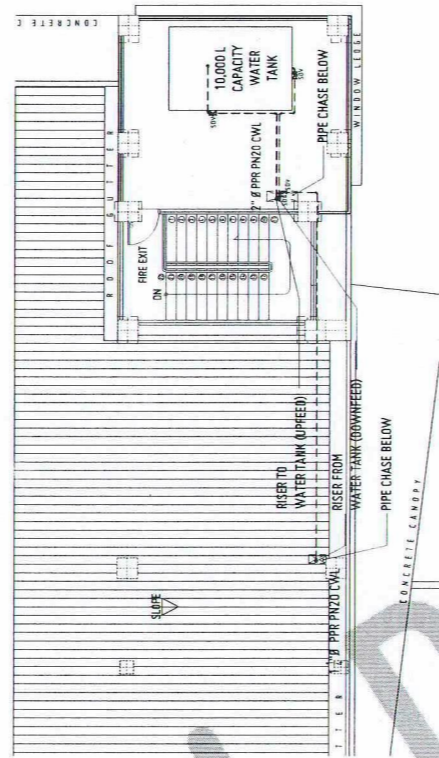
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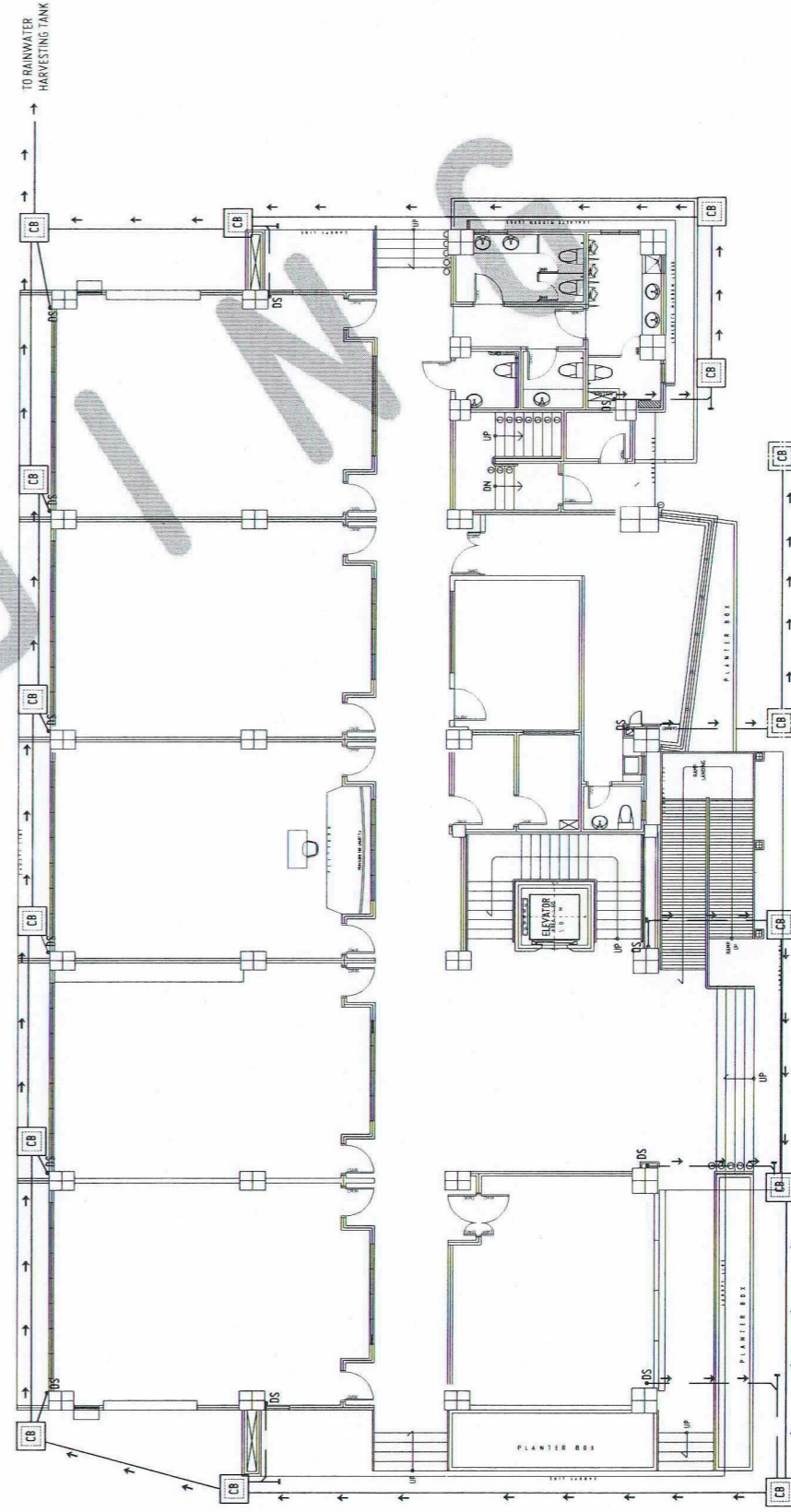




FIFTH FLOOR - WATER LINE LAYOUT
SCALE: 1:100 MTS
P 4 1



**ROOF DECK - WATER LINE LAYOUT
PHASE 1 CONSTRUCTION**
SCALE: 1:100 MTS
A 4 2



GROUND FLOOR - STORM DRAIN LAYOUT
SCALE: 1:100 MTS
P 4 3



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CLARIE M. RECTO AVENUE, LAPASAN, CAGAYAN DE ORO CITY 9000
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WEBSITE: www.ustp.edu.ph

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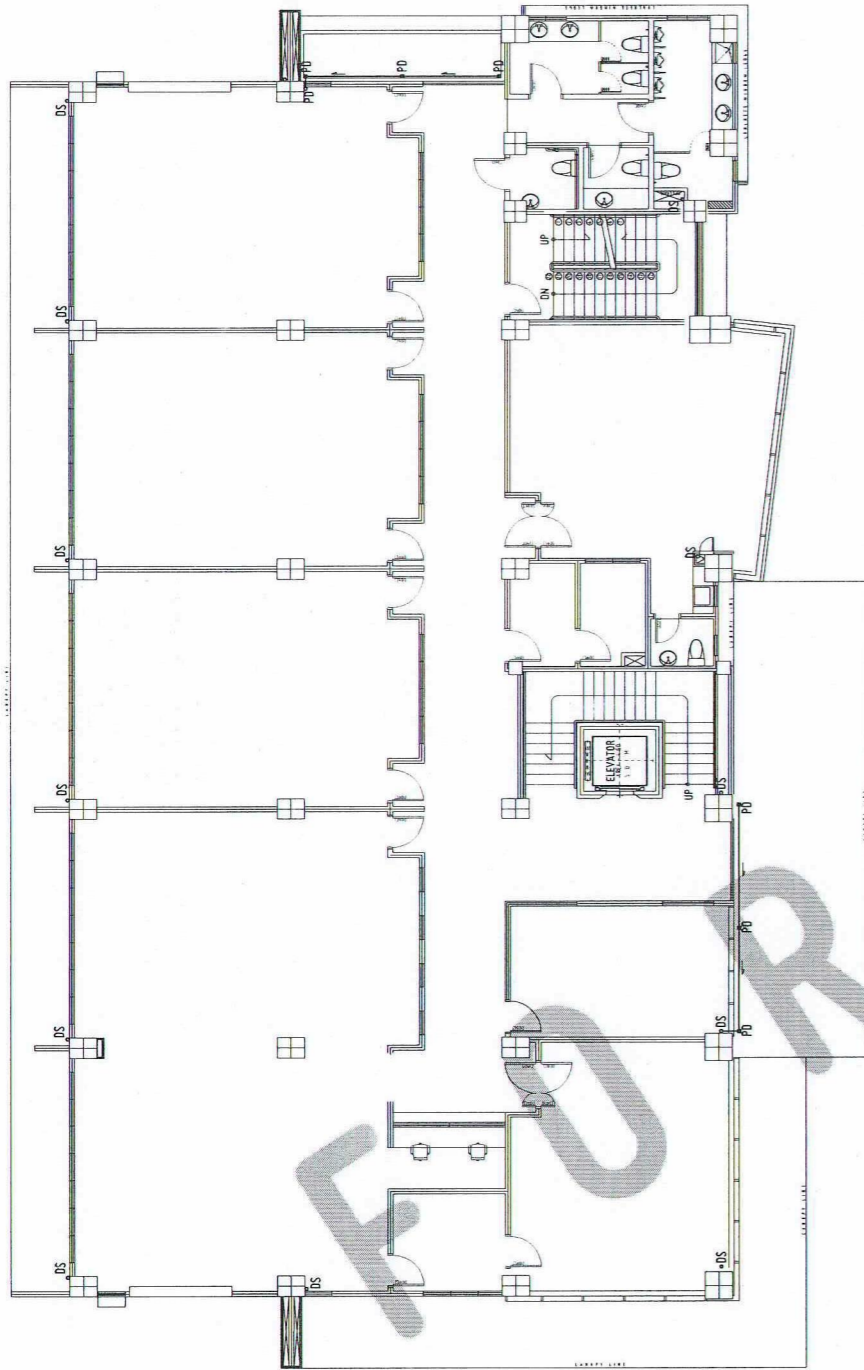
RECOMMENDING APPROVAL:	ATTY. ERWIN B. RUCIO VP FOR ADMINISTRATION & LEGAL AFFAIRS
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APPROVED BY:	DR. AMBROSIO B. CULTURA II PRESIDENT, USTP SYSTEM
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SHEET CONTENTS:	WATER LINE LAYOUT: FIFTH FLOOR ROOF DECK STORM DRAIN LAYOUT: GROUND FLOOR
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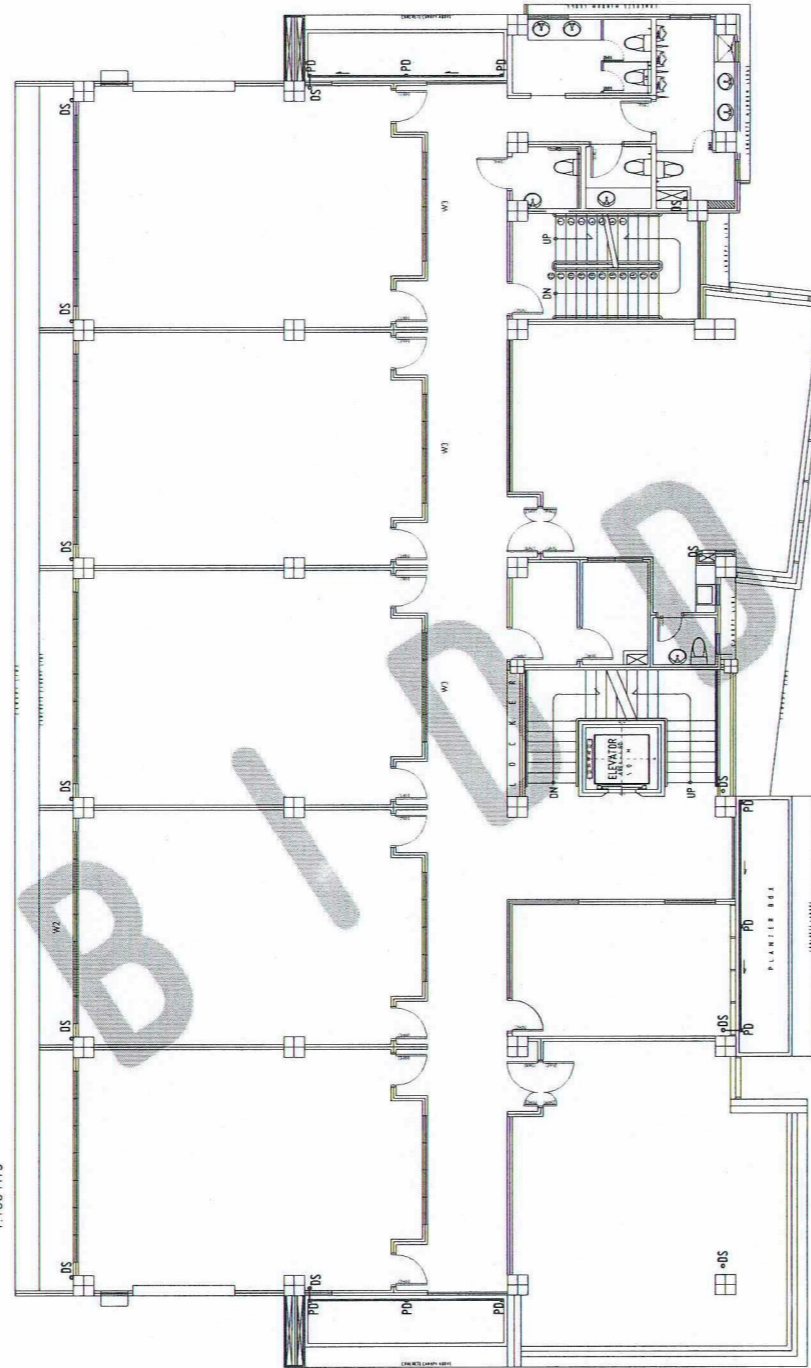
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SECOND FLOOR - STORM DRAIN LAYOUT

SCALE: 1:100 MTS

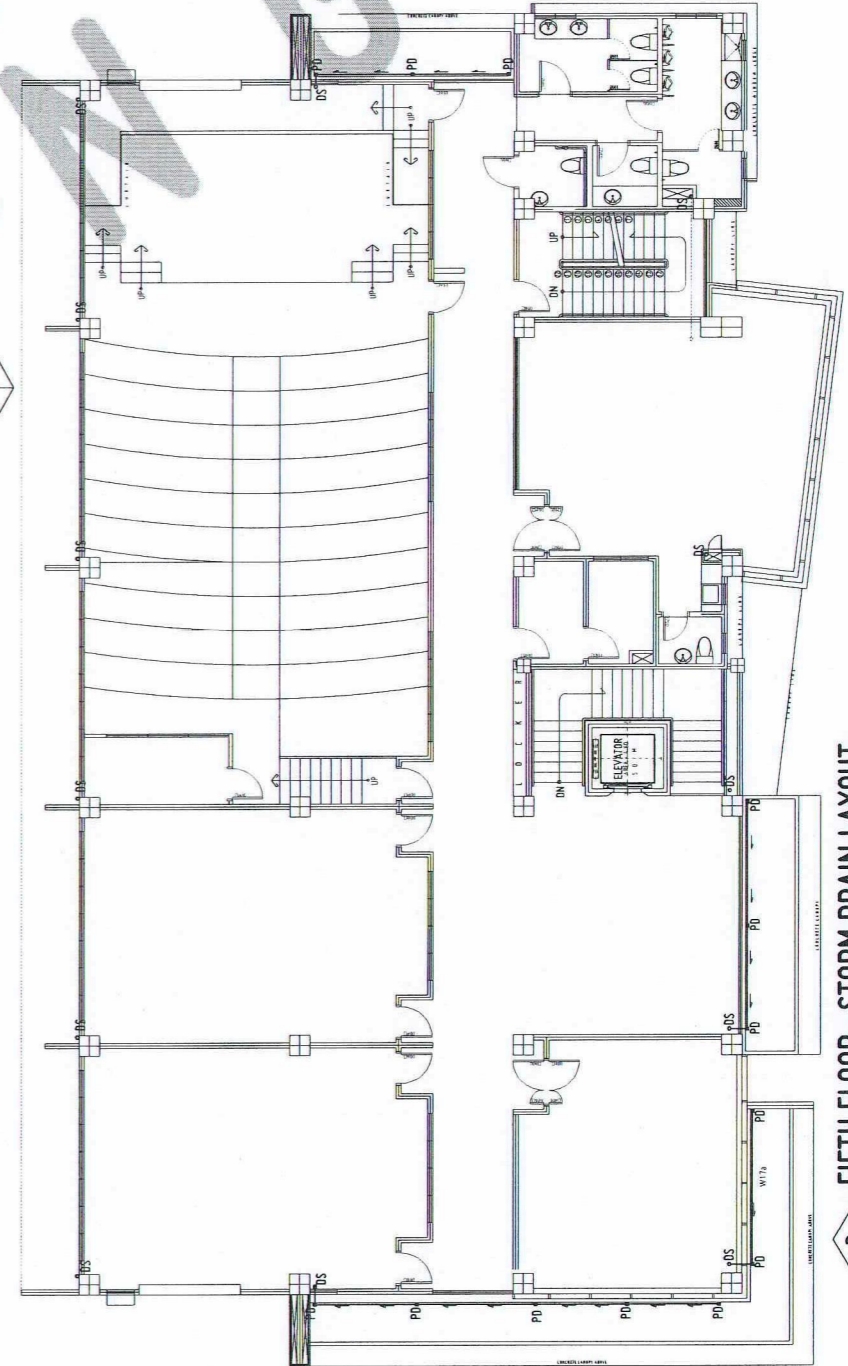
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5 1



**TYPICAL FLOOR-THIRD & FOURTH FLOOR
STORM DRAIN LAYOUT**

SCALE: 1:100 MTS

P
5 2



FIFTH FLOOR - STORM DRAIN LAYOUT

SCALE: 1:100 MTS

P
5 3



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MASTER PLUMBER

PROJECT
LOCATION
OWNER

PROPOSED CONSTRUCTION OF SMART ACADEMIC BUILDING
PHASE 1, JASAAN CAMPUS
USTP JASAAN CAMPUS, MISAMIS ORIENTAL
UNIVERSITY OF SCIENCE AND TECHNOLOGY OF SOUTHERN PHILIPPINES

RECOMMENDING APPROVAL:
Grace C. Baba
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DIRECTOR, INFRASTRUCTURE PLANNING & FACILITIES DEVELOPMENT OFFICE

RECOMMENDING APPROVAL:
Atty. Erwin B. Bucio
ATTY. ERWIN B. BUCIO
VP FOR ADMINISTRATION & LEGAL AFFAIRS

APPROVED BY:
Dr. Ambracio B. Cultura II
DR. AMBRACIO B. CULTURA II
PRESIDENT, USTP SYSTEM

SHEET CONTENTS:
STORM DRAIN LAYOUT:
SECOND FLOOR
TYPICAL FLOOR 3RD & 4TH
FIFTH FLOOR

DRAWN BY:
DATE DRAWN:
10.01.2025
PNT:

P5