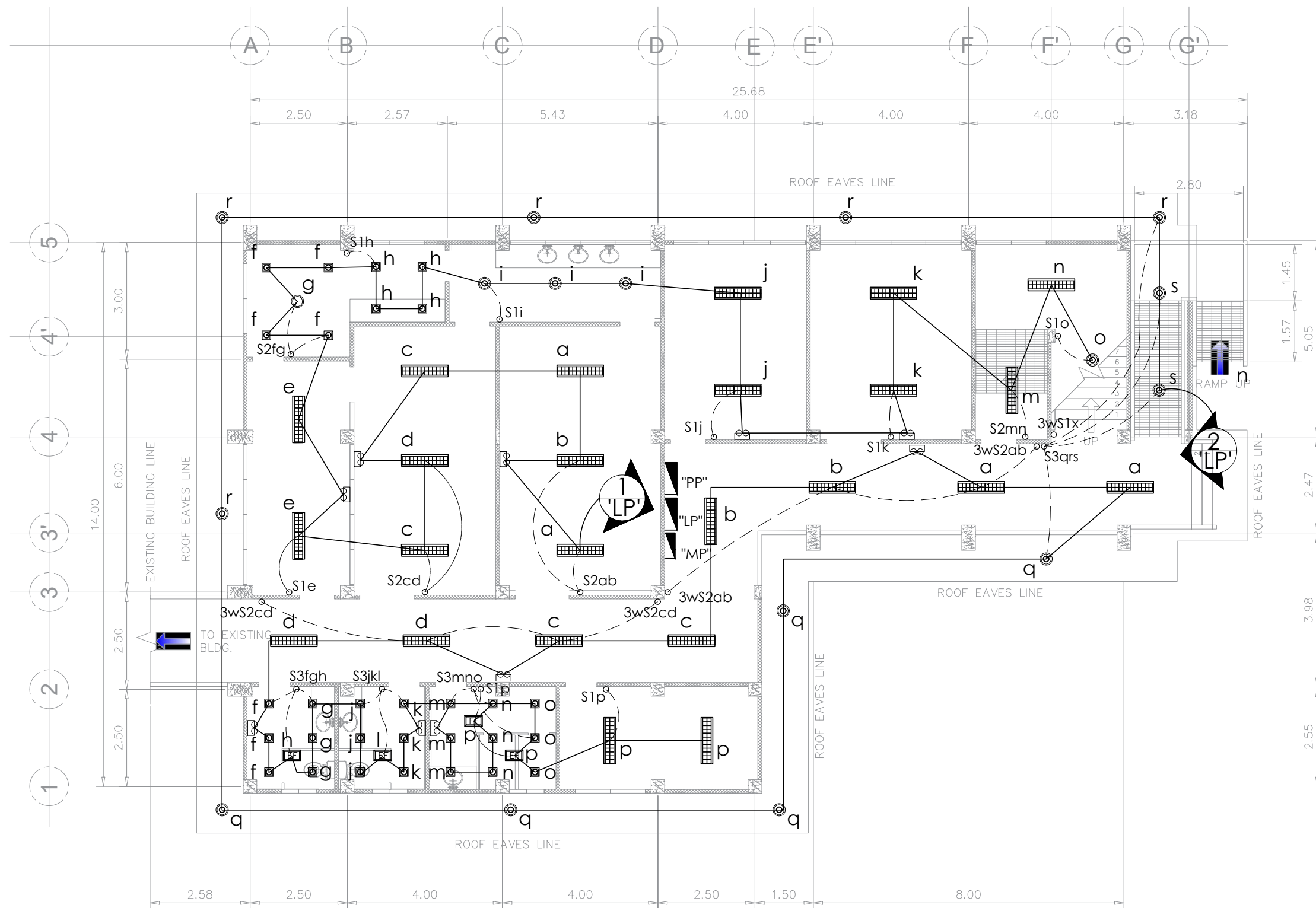
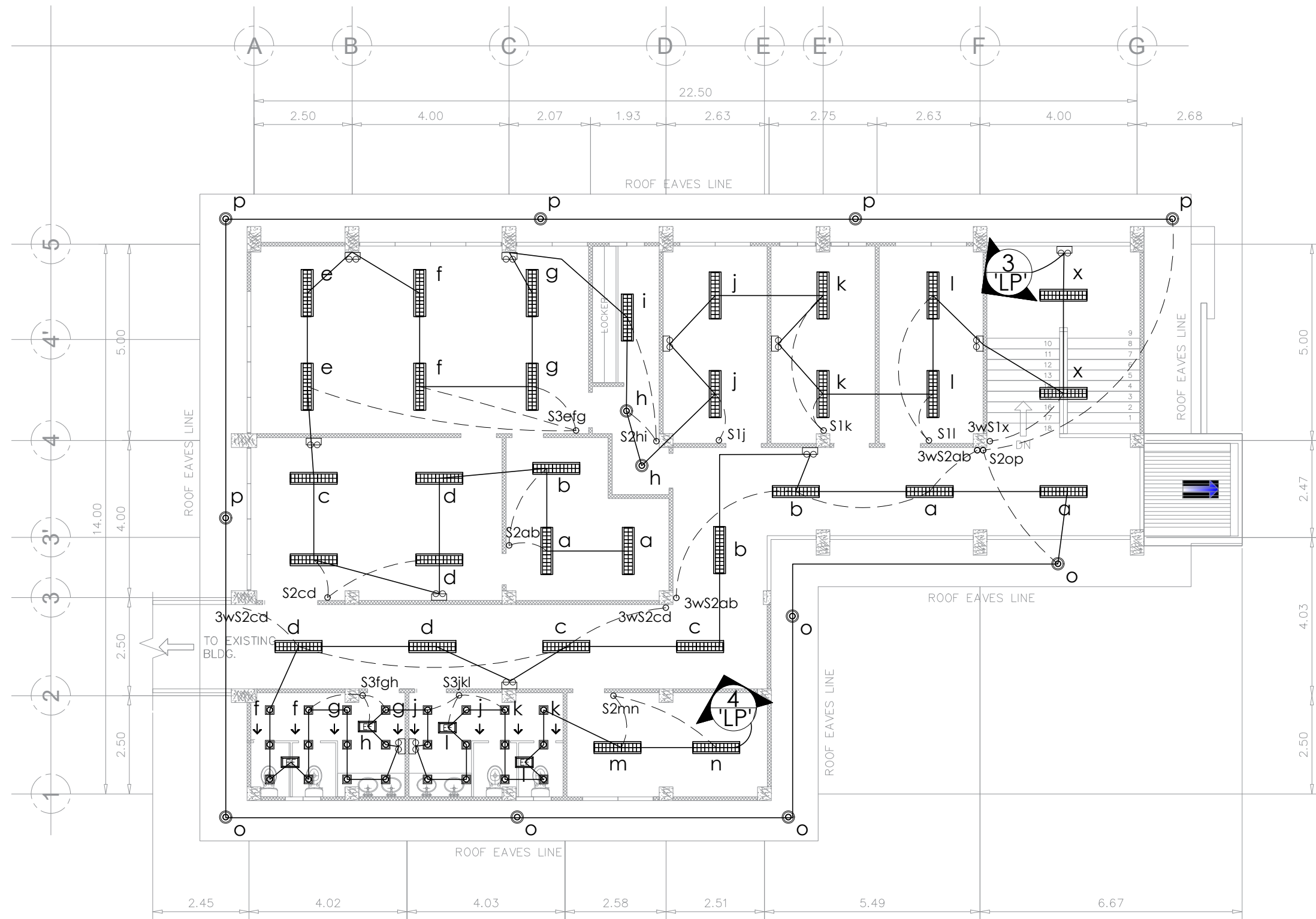




GROUND FLOOR
1 LIGHTING LAY-OUT
E-1 SCALE 1 : 100 M



TIN :	Prepared by: Engr. CLINT C. SARVIDA	<
-------	---	---



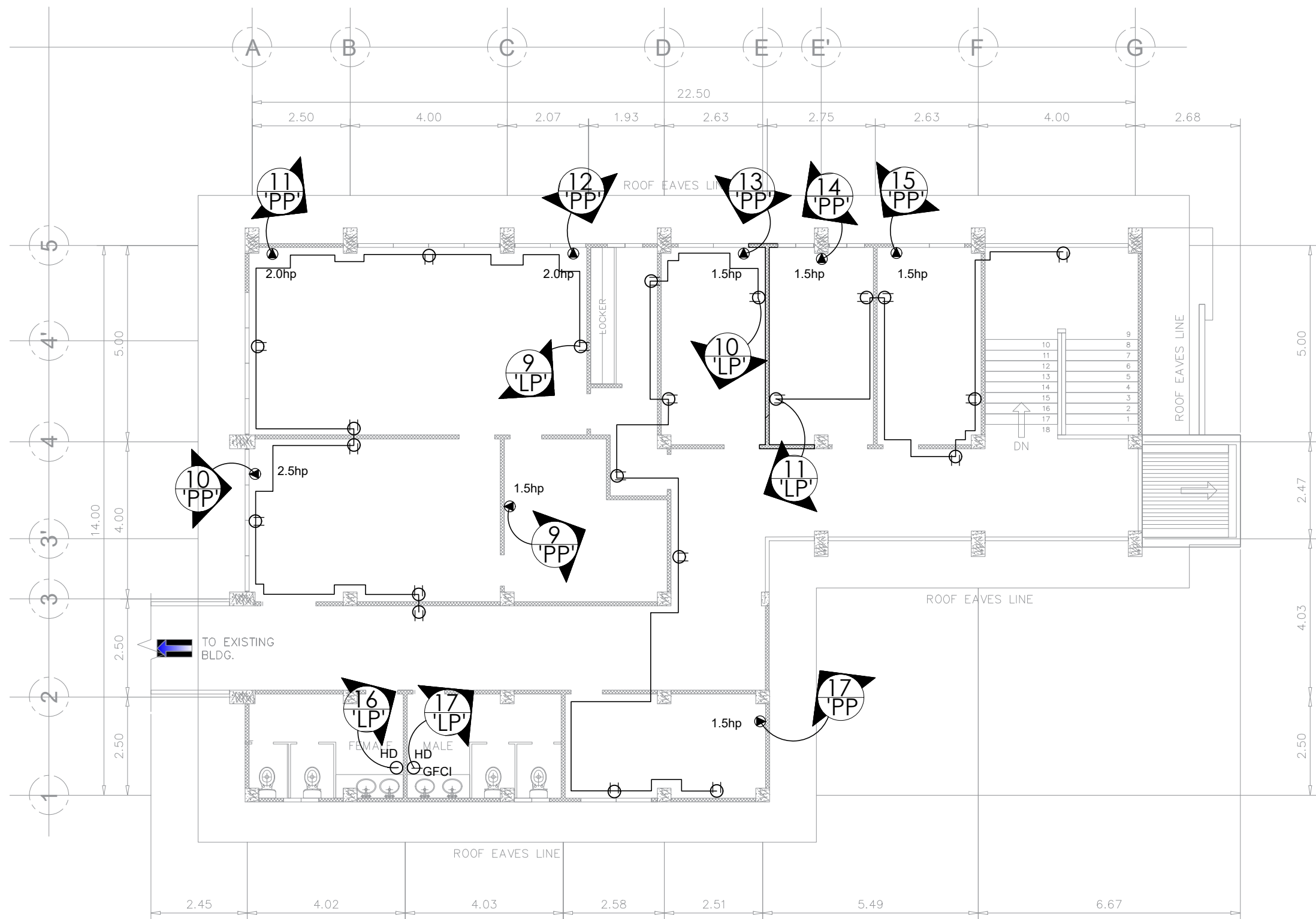
1
E-2

**SECOND FLOOR
LIGHTING LAY-OUT**

SCALE 1 : 100 M



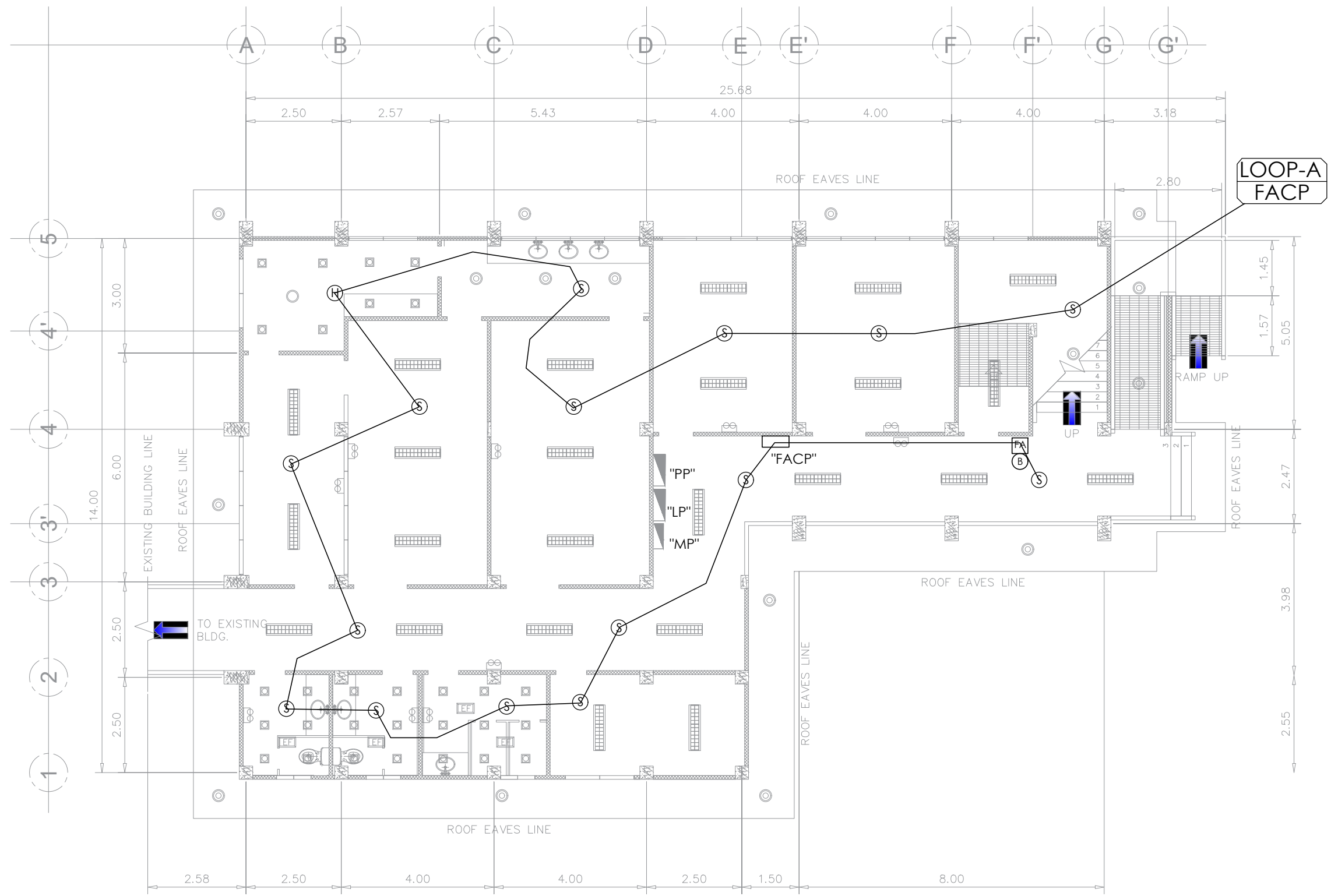
TIN :	Prepared by: Engr. CLINT C. SARVIDA Student Engineer	# 01	Project Title :	Checked by :	Noted by :	Conformed by :	Approved by :	Concept by :	E2 01		
PRC : 0059366			CONSTRUCTION OF ANIMAL TESTING FACILITY	Engr. MARIO LILIO P. VALENZONA	Dr. SANTIAGO T. PENA, Jr.	Dr. DANIEL LESLIE A. TAN	Dr. EDGARDO E. TULIN	AutoCAD by :		SHEET NO.	
PTR :								Date Started :		02	09
Date : 09/30/2015								Date Finished :			
Place : Ormoc City								Place :			



**SECOND FLOOR
1 LIGHTING LAY-OUT**
E-2 SCALE 1 : 100 M



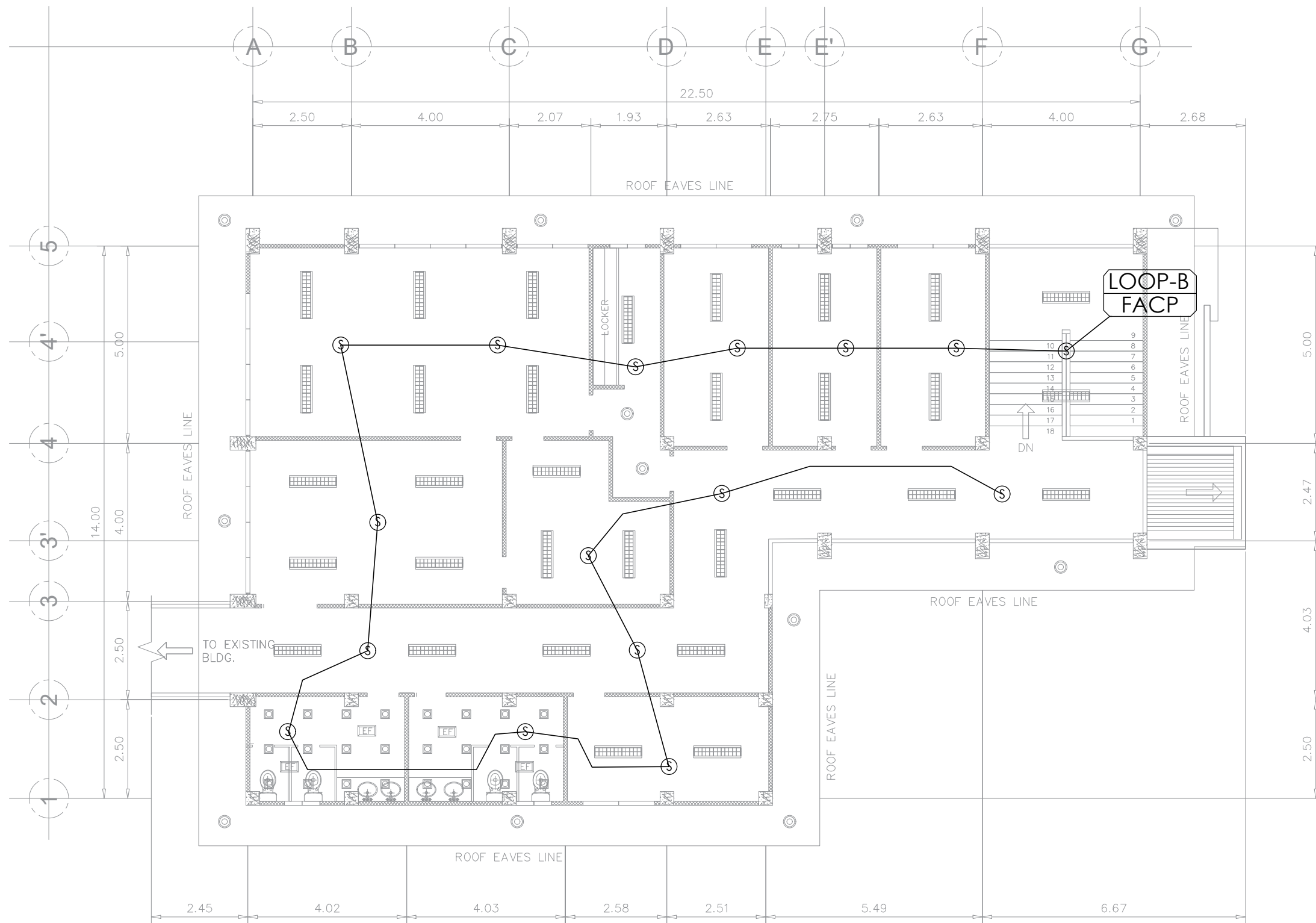
TIN :	Prepared by: Engr. CLINT C. SARVIDA		Project Title :	Checked by :	Noted by :	Conformed by :	Approved by :	Concept by :	E401 SHEET NO. 0409
PRC : 0059366			CONSTRUCTION OF ANIMAL TESTING FACILITY	Engr. MARIO LILIO P. VALENZONA	Dr. SANTIAGO T. PENA, Jr.	Dr. DANIEL LESLIE A. TAN	Dr. EDGARDO E. TULIN	AutoCAD by :	
PTR :								Date Started :	
Date : 09/30/2015								Date Finished :	
Place : Ormoc City			Electrical Engineer	Location : VSU Main Campus, Baybay City, Leyte Philippines	DIRECTOR, PPO	DEAN, CVM	VP OF ADMINISTRATIVE AND FINANCE	VSU PRESIDENT	



**GROUND FLOOR
1 FIRE ALARM LAY-OUT**
E-5 SCALE 1: 100 M



TIN :	Prepared by:	
-------	--------------	--



1
E-6

SECOND FLOOR
FIRE ALARM LAY-OUT

SCALE 1: 100 M



TIN :	Prepared by:	NOTES: 1. THIS DRAWING AND SPECIFICATIONS ARE THE PROPERTY OF VISAYAS STATE UNIVERSITY. IT IS TO BE USED FOR THE PROJECT ONLY. IT IS NOT TO BE REPRODUCED OR COPIED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT PERMISSION IN WRITING FROM THE UNIVERSITY. VIOLATION OF THIS POLICY WILL BE PROSECUTED TO THE FULL EXTENT OF THE LAW.	Project Title :	Checked by :	Noted by :	Conformed by :	Approved by :	Concept by :	E601 SHEET NO. 0609	
PRC : 0059366	Engr. CLINT C. SARVIDA		CONSTRUCTION OF ANIMAL TESTING FACILITY	Engr. MARIO LILJOP. VALENZONA	Dr. SANTIAGO T. PENA, Jr.	Dr. DANIEL LESLIE A. TAN	Dr. EDGARDO E. TULIN	AutoCAD by :		
PTR :								Date Started :		
Date : 09/30/2015								Date Finished :		
Place : Ormoc City	Blanking Engineer		Location : VSU Main Campus, Baybay City, Leyte Philippines	DIRECTOR, PPO	DEAN, CVM	VP OF ADMINISTRATIVE AND FINANCE	VSU PRESIDENT	Place :		

1

E-9

GENERAL NOTES

NOT

TO

SCALE

1. ALL ELECTRICAL WORKS SHALL COMPLY IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS. THE APPLICABLE PROVISIONS OF THE LATEST EDITION OF THE PHILIPPINE ELECTRICAL CODE (PEC),THE RULES AND REGULATIONS OF THE LOCAL ENFORCING AUTHORITY AND THE REQUIREMENTS OF THE LOCAL POWER COMPANY. THE ELECTRICAL WORKS SHALL BE UNDER IMMEDIATE SUPERVISION OF A DULLY REGISTERED ELECTRICAL ENGINEER.
2. THE ELECTRICAL SERVICE POWER IS 3 - PHASE, 3 WIRE + GROUND 230 V AC, 60Hz.
3. WIRING METHOD SHALL BE AS FOLLOWS :

a. FEEDERS AND RISERS - POLYVINYL CHLORIDE CONDUIT

b. LIGHTING, POWER RECEPTACLE

BRANCH CKT., & AUXILLARY - POLYVINYL CHLORIDE CONDUIT
4. ALL WIRES SHALL BE COPPER AND THERMOPLASTIC INSULATED TYPE "THHN" UNLESS OTHERWISE INDICATED IN THE PLAN. THE MINIMUM SIZE OF WIRE FOR POWER AND LIGHTING CIRCUIT HOME RUN SHALL BE 3.5 mm AND INSULATED FOR 600 VOLTS. SMALLEST RACEWAY SHALL BE 15 mm2 TRADE/NOMINAL SIZE. LIKewise ALL ELECTRICAL WIRES SHALL BE COLOR CODED.
5. ALL OUTLET BOXES SHALL BE GALVANIZED GAGE NO. 16 DEEP TYPE WITH FACTORY KNOCKOUTS.
6. ALL MATERIALS TO BE USED SHALL BE BRAND NEW AND APPROVED TYPE FOR THE PARTICULAR LOCATION AND PURPOSE OF USAGE.
7. EQUIPMENT GROUNDING SYSTEM SHALL BE PROVIDED TO ELECTRICAL SYSTEM AS PER ELECTRICAL CODE REQUIREMENT.
8. MOUNTING HEIGHT OF WIRING DEVICES SHALL BE AS FOLLOWS :

a. LIGHT SWITCH - 1.20 M ABOVE FINISHED FLOOR

b. CONVENIENCE OUTLET - 0.30 M ABOVE FINISHED FLOOR

c. PANELBOARD - 1.80 M ABOVE FINISHED FLOOR

d. FIRE ALARM STATION OUTLET - 1.50 ABOVE FINISHED FLOOR

e. PUSH BOTTON OUTLET - 1.20 M ABOVE FINISHED FLOOR

f. FIRE ALARM AND VIBRATING BELL - 0.30 M BELOW CEILING LINE

2

E-9

ELECTRICAL LEGEND

NOT

TO

SCALE

- 3 WATTS SQUARE LIGHT
- 7 WATTS CIRCULAR PINLIGHT
- 20 WATTS CIRCULAR LIGHTING FIXTURE
- 2x40W FLOURESCENT LAMP LIGHTING FIXTURE
- EXHAUST FAN
- ☎

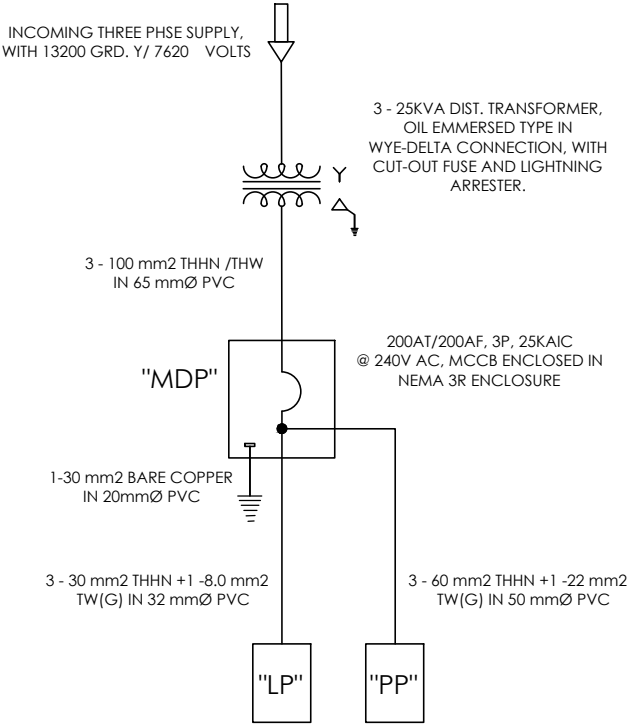
BATTERY POWERED EMERGENCY LIGHT
- ⏏

TWO GANG WITH GROUND PRONG CONVENIENCE OUTLET
- ⏏CH

TWO GANG WITH GROUND PRONG CONVENIENCE OUTLET (COUNTER HEIGHT)
- AIRCONDITIONING OUTLET
- E

RANGE OUTLET
- SMOKE DETECTOR
- HEAT DETECTOR
- 🔔

FIRE ALARM BELL & MANUAL CALL POINT
- FIRE ALARM CONTROL PANEL
- PANEL BOARD WITH NEMA ENCLOSURE



4

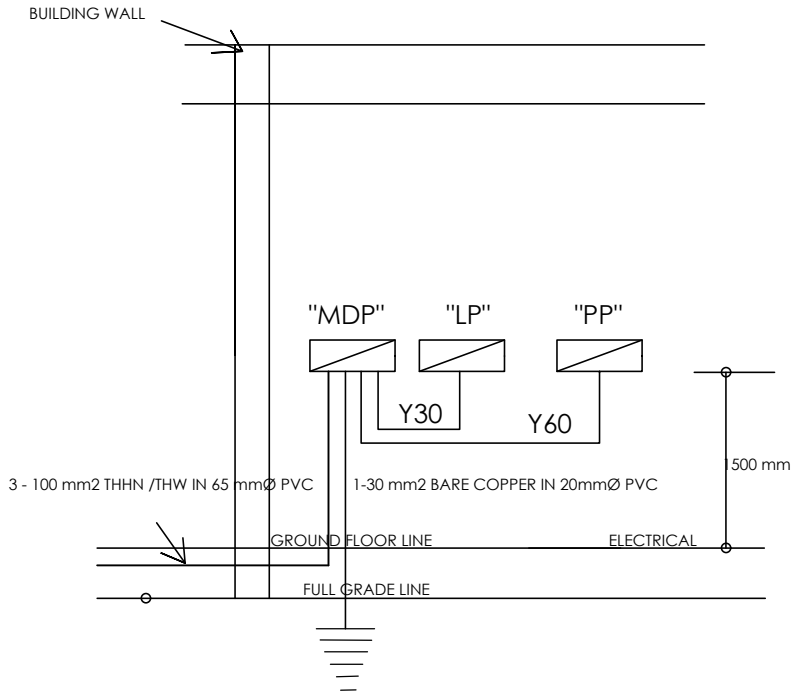
E-9

SINGLE LINE DIAGRAM

NOT

TO

SCALE



3

E-9

RISER DIAGRAM

NOT

TO

SCALE

	TIN :	Prepared by: Engr. CLINT C. SARVIDA	■ REC: THIS DRAWING HAS BEEN CHECKED FOR ALL DIMENSIONS, MATERIALS, AND SPECIFICATIONS. THE DESIGNER IS RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED. ANY CHANGES TO THIS DRAWING MUST BE APPROVED BY THE DESIGNER AND THE PROJECT MANAGER.	Project Title :	Checked by :	Noted by :	Conformed by :	Approved by :	Concept by :	E7 04 SHEET NO. 09 09
	PRC : 0059366			CONSTRUCTION OF ANIMAL TESTING FACILITY	Engr. MARIO LILIO P. VALENZONA	Dr. SANTIAGO T. PENA, Jr.	Dr. DANIEL LESLIE A. TAN	Dr. EDGARDO E. TULIN	AutoCAD by :	
	PTR :								Date Started :	
	Date : 09/30/2015								Date Finished :	
	Place : Osmoc City								Place :	
				Location : VSU Main Campus, Baybay City, Leyte Philippines	DIRECTOR, PPO	DEAN, CVM	VP OF ADMINISTRATIVE AND FINANCE	VSU PRESIDENT		

PROJECT NAME:			CONSTRUCTION OF ANIMAL TESTING FACILITY												WIRE COLOR CODING :			
ADDRESS:			MAIN VSU CAMPUS, BAYBAY CITY LEYTE, PHILIPPINES, 6521												L1- RED			
PANEL NAME:			"LP"												L2- YELLOW			
ENCLOSURE:			NEMA 3R												L3- BLUE			
LOAD CONFIGURATION:			DELTA CONNECTED LOAD												G- GREEN			
			SYSTEM :					THREE PHASE CORNER GROUNDED DELTA CONNECTION										
			VOLTAGE:					240 VOLTS										
			FREQUENCY:					60 HZ										
CKT. NO.	LOAD DESCRIPTION	OTHERS	LOAD (VA)	LOAD IN AMPERE				OVERCURRENT PROTECTION (INVERSE TIME DELAY)					WIRES (THHN/THW)			CONDUITS (PVC)	REMARKS	
				AB	BC	CA	3Ø	AT	AF	P	KAIC	TYPE	SETS	PHASE	EGC			
1	LIGHTING OUTLET (27 units)	5 em. lights	1292	5.38				20	50	2	8	MCCB	1	3.5 mm2	3.5 mm2	20 mm dia.		
2	LIGHTING OUTLET (43 units)	5 em. lights & 4 exh.fan	1127	4.70				20	50	2	8	MCCB	1	3.5 mm2	3.5 mm2	20 mm dia.		
3	LIGHTING OUTLET (24 units)	8 em. lights	1934		8.06			20	50	2	8	MCCB	1	3.5 mm2	3.5 mm2	20 mm dia.		
4	LIGHTING OUTLET (44 units)	4 em. lights & 4 exh.fan	1102		4.59			20	50	2	8	MCCB	1	3.5 mm2	3.5 mm2	20 mm dia.		
5	FIRE ALARM CIRCUIT		500			2.08		20	50	2	8	MCCB	1	3.5 mm2	3.5 mm2	20 mm dia.		
6	RECEPTACLE OUTLET (11 units)		2200			9.17		20	50	2	8	MCCB	1	3.5 mm2	3.5 mm2	20 mm dia.		
7	RECEPTACLE OUTLET (6 units)		1200	5.00				20	50	2	8	MCCB	1	3.5 mm2	3.5 mm2	20 mm dia.		
8	RECEPTACLE OUTLET (5 units)		1000	4.17				20	50	2	8	MCCB	1	3.5 mm2	3.5 mm2	20 mm dia.		
9	RECEPTACLE OUTLET (8 units)		1600		6.67			20	50	2	8	MCCB	1	3.5 mm2	3.5 mm2	20 mm dia.		
10	RECEPTACLE OUTLET (7 units)		1400		5.83			20	50	2	8	MCCB	1	3.5 mm2	3.5 mm2	20 mm dia.		
11	RECEPTACLE OUTLET (6 units)		1200			5.00		20	50	2	8	MCCB	1	3.5 mm2	3.5 mm2	20 mm dia.		
12	RANGE OUTLET(1 unit)		8000			33.33		40	50	2	8	MCCB	1	3.5 mm2	3.5 mm2	20 mm dia.		
13	HAND DRYER		1800	7.50				20	50	2	8	MCCB	1	3.5 mm2	3.5 mm2	20 mm dia.		
14	HAND DRYER		1800	7.50				20	50	2	8	MCCB	1	3.5 mm2	3.5 mm2	20 mm dia.		
15	HAND DRYER		1800		7.50			20	50	2	8	MCCB	1	3.5 mm2	3.5 mm2	20 mm dia.		
16	HAND DRYER		1800		7.50			20	50	2	8	MCCB	1	3.5 mm2	3.5 mm2	20 mm dia.		
17	HAND DRYER		1800			7.50		20	50	2	8	MCCB	1	3.5 mm2	3.5 mm2	20 mm dia.		
18	SPACE					-		-	-	-	-	-	-	-	-	-		
19	SPARE		1000	4.17				20	50	2	8	MCCB	1	-	-	20 mm dia.	20 mm dia. conduit stud	
20	SPARE		1000	4.17				20	50	2	8	MCCB	1	-	-	20 mm dia.	20 mm dia. conduit stud	
21	SPARE		1000		4.17			20	50	2	8	MCCB	1	-	-	20 mm dia.	20 mm dia. conduit stud	
22	SPARE		1000		4.17			20	50	2	8	MCCB	1	-	-	20 mm dia.	20 mm dia. conduit stud	
23	SPACE					-		-	-	-	-	-	-	-	-	-	20 mm dia. conduit stud	
24	SPACE					-		-	-	-	-	-	-	-	-	-		
TOTAL																		
1. TOTAL LOAD			FEEDER AND CONDUIT SIZE:															
= 35555 VA			Use : 3 - 30mm2 THHN/THW + 8.0mm2 TW wire in 32 mm dia. IMC pipe															
D.F. = $\frac{0.8}{28444}$ VA			FEEDER PROTECTION SIZE:															
2. LINE CURRENT			Use : 80 AT/ 80AF, 3P, 18KAIC, MCCB															
68.43 A																		

PANEL "LP"

1
E-7

NOT TO SCALE



TIN :
PRC : 0059366
PTR :
Date : 09/30/2015
Place : Ormoc City

Prepared by:

Engr. CLINT C. SARVIDA

Electrical Engineer

101

PROCESSED BY: ENGINEER
REVIEWED BY: ENGINEER
APPROVED BY: ENGINEER
DATE: 09/30/2015
PLACE: ORMOC CITY

Project Title :

CONSTRUCTION OF ANIMAL TESTING FACILITY

Location : VSU Main Campus, Baybay City, Leyte Philippines

Checked by :

Engr. MARIO LILIO P. VALENZONA

DIRECTOR, PPO

Noted by :

Dr. SANTIAGO T. PENA, Jr.

DEAN, CVM

Conformed by :

Dr. DANIEL LESLIE A. TAN

VP OF ADMINISTRATIVE AND FINANCE

Approved by :

Dr. EDGARDO E. TULIN

VSU PRESIDENT

Concept by :

AutoCAD by :

Date Started :

Date Finished :

Place :

E8 01

SHEET NO.

07 09

PROJECT NAME: CONSTRUCTION OF ANIMAL TESTING FACILITY															WIRE COLOR CODING :		
ADDRESS: MAIN VSU CAMPUS, BAYBAY CITY LEYTE, PHILIPPINES, 6521															L1- RED		
PANEL NAME: "PP"															L2- YELLOW		
ENCLOSURE: NEMA 3R															L3- BLUE		
LOAD CONFIGURATION: DELTA CONNECTED LOAD															G- GREEN		
			SYSTEM : THREE PHASE CORNER GROUNDED DELTA CONNECTION														
			VOLTAGE: 240 VOLTS														
			FREQUENCY: 60 HZ														
CKT. NO.	LOAD DESCRIPTION	OTHERS	LOAD (VA)	LOAD IN AMPERE				OVERCURRENT PROTECTION (INVERSE TIME DELAY)					WIRES (THHN/THW)			CONDUITS (PVC)	REMARKS
				AB	BC	CA	3Ø	AT	AF	P	KAIC	TYPE	SETS	PHASE	EGC		
1	AIRCONDITIONER (2.5 HP)		4080	17.00				30	50	2	8	MCCB	1	5.5 mm2	3.5 mm2	20 mm dia.	
2	AIRCONDITIONER (2.5 HP)		4080	17.00				30	50	2	8	MCCB	1	5.5 mm2	3.5 mm2	20 mm dia.	
3	AIRCONDITIONER (2.0 HP)		2880		12.00			30	50	2	8	MCCB	1	5.5 mm2	3.5 mm2	20 mm dia.	
4	AIRCONDITIONER (1.5 HP)		2400		10.00			30	50	2	8	MCCB	1	5.5 mm2	3.5 mm2	20 mm dia.	
5	AIRCONDITIONER (2.0 HP)		2880			12.00		30	50	2	8	MCCB	1	5.5 mm2	3.5 mm2	20 mm dia.	
6	AIRCONDITIONER (2.0 HP)		2880			12.00		30	50	2	8	MCCB	1	5.5 mm2	3.5 mm2	20 mm dia.	
7	AIRCONDITIONER (2.0 HP)		2880	12.00				30	50	2	8	MCCB	1	5.5 mm2	3.5 mm2	20 mm dia.	
8	AIRCONDITIONER (1.5 HP)		2400	10.00				30	50	2	8	MCCB	1	5.5 mm2	3.5 mm2	20 mm dia.	
9	AIRCONDITIONER (1.5 HP)		2400		10.00			30	50	2	8	MCCB	1	5.5 mm2	3.5 mm2	20 mm dia.	
10	AIRCONDITIONER (2.5 HP)		4080		17.00			30	50	2	8	MCCB	1	5.5 mm2	3.5 mm2	20 mm dia.	
11	AIRCONDITIONER (2.0 HP)		2880			12.00		30	50	2	8	MCCB	1	5.5 mm2	3.5 mm2	20 mm dia.	
12	AIRCONDITIONER (2.0 HP)		2880			12.00		30	50	2	8	MCCB	1	5.5 mm2	3.5 mm2	20 mm dia.	
13	AIRCONDITIONER (1.5 HP)		2400	10.00				30	50	2	8	MCCB	1	5.5 mm2	3.5 mm2	20 mm dia.	
14	AIRCONDITIONER (1.5 HP)		2400	10.00				30	50	2	8	MCCB	1	5.5 mm2	3.5 mm2	20 mm dia.	
15	AIRCONDITIONER (1.5 HP)		2400		10.00			30	50	2	8	MCCB	1	5.5 mm2	3.5 mm2	20 mm dia.	
16	SPARE		2880		12.00			30	50	2	8	MCCB	-	-	-	20 mm dia.	20 mm dia. conduit stud
17	AIRCONDITIONER (1.5 HP)		2400			10		30	50	2	8	MCCB	1	5.5 mm2	3.5 mm2	20 mm dia.	
18	SPARE		2400			10		30	50	2	8	MCCB	-	-	-	20 mm dia.	20 mm dia. conduit stud
TOTAL			51600	76.00	71.00	68.00	0										
1. TOTAL LOAD																	
= 51600 VA																	
D.F. = 0.9																	
46440 VA																	
2. LINE CURRENT																	
111.72 A																	
FEEDER AND CONDUIT SIZE:																	
Use : 3 - 60mm2 THHN/THW + 22mm2 TW wire in 50 mm dia. IMC pipe																	
FEEDER PROTECTION SIZE:																	
Use : 150 AT/ 150AF, 3P, 18KAIC, MCCB																	

PROJECT NAME: CONSTRUCTION OF ANIMAL TESTING FACILITY														WIRE COLOR CODING :					
ADDRESS: MAIN VSU CAMPUS, BAYBAY CITY LEYTE, PHILIPPINES, 6521														L1- RED					
PANEL NAME: "MDP"														L2- YELLOW					
ENCLOSURE: NEMA 3R														L3- BLUE					
LOAD CONFIGURATION: DELTA CONNECTED LOAD														G- GREEN					
SYSTEM : THREE PHASE CORNER GROUNDED DELTA CONNECTION																			
VOLTAGE: 240 VOLTS																			
FREQUENCY: 60 HZ																			
CKT. NO.	LOAD DESCRIPTION	OTHERS	LOAD (VA)	LOAD IN AMPERE				OVERCURRENT PROTECTION (INVERSE TIME DELAY)					WIRES (THHN/THW)			CONDUITS (PVC)	REMARKS		
				L1	L2	L3	3Ø	AT	AF	P	KAIC	TYPE	SETS	PHASE	EGC				
1	PANEL "LP"		35555	68.43	68.43	68.43		-	-	-	-	-	1	30 mm2	14 mm2	32 mm dia.			
2	PANEL "PP"		51600	111.72	111.72	111.72		-	-	-	-	-	1	60 mm2	22 mm2	50 mm dia.			
TOTAL				87155	180.15	180.15	180.15	0											
1. TOTAL LOAD																			
= 87155 VA																			
D.F. = 0.8																			
69724 VA																			
2. LINE CURRENT																			
167.73 A																			
FEEDER AND CONDUIT SIZE:																			
Use : 3 - 100mm2 THHN/THW + 30mm2 TW wire in 65 mm dia. IMC pipe																			
FEEDER PROTECTION SIZE:																			
Use : 200 AT/ 200AF, 3P, 25KAIC, MCCB																			

1

E-8

PANEL "PP" & "MDP"

SCHEDULE OF LOADS

NOT

TO

SCALE