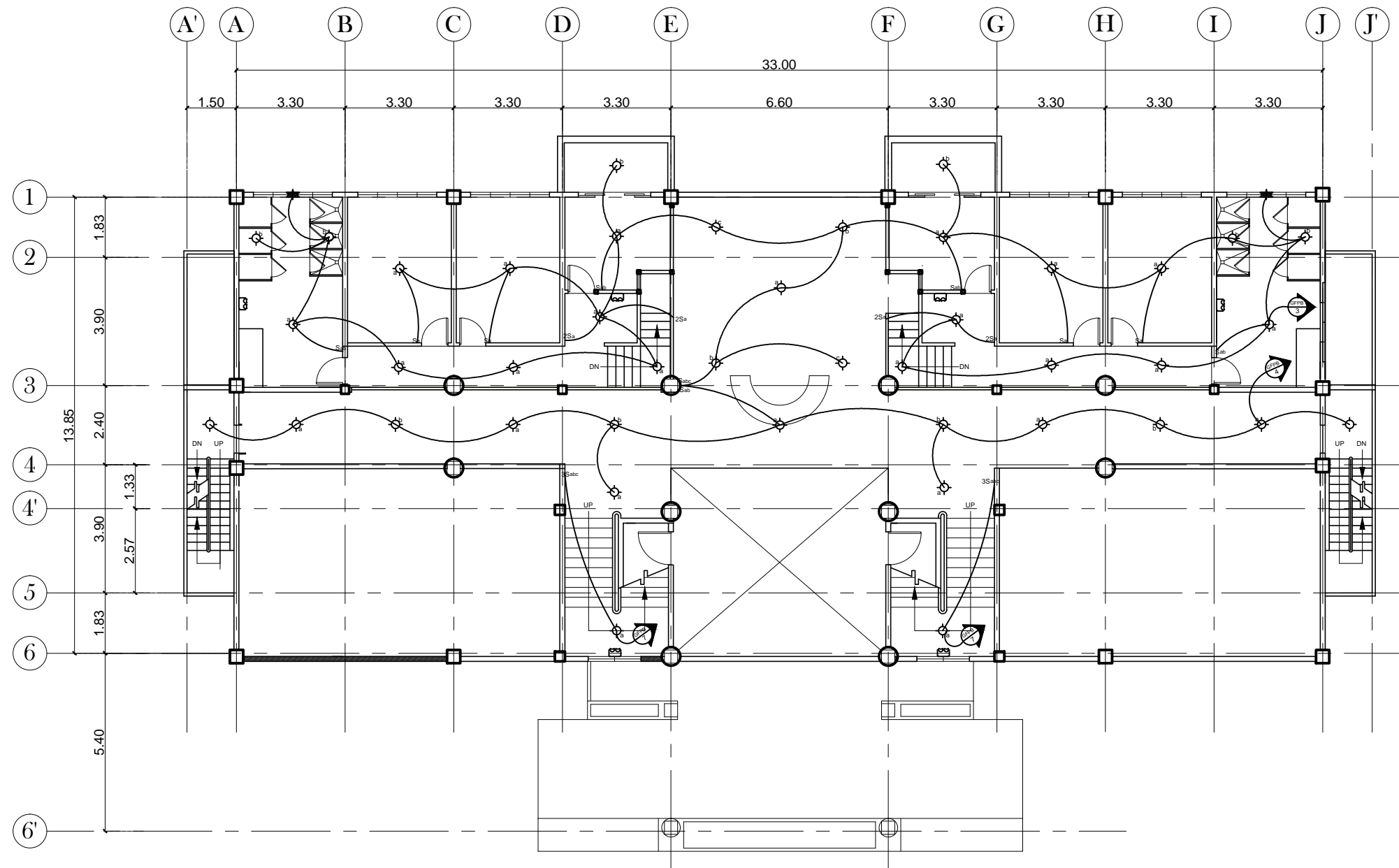


GROUND FLOOR  
**LIGHTING LAYOUT**

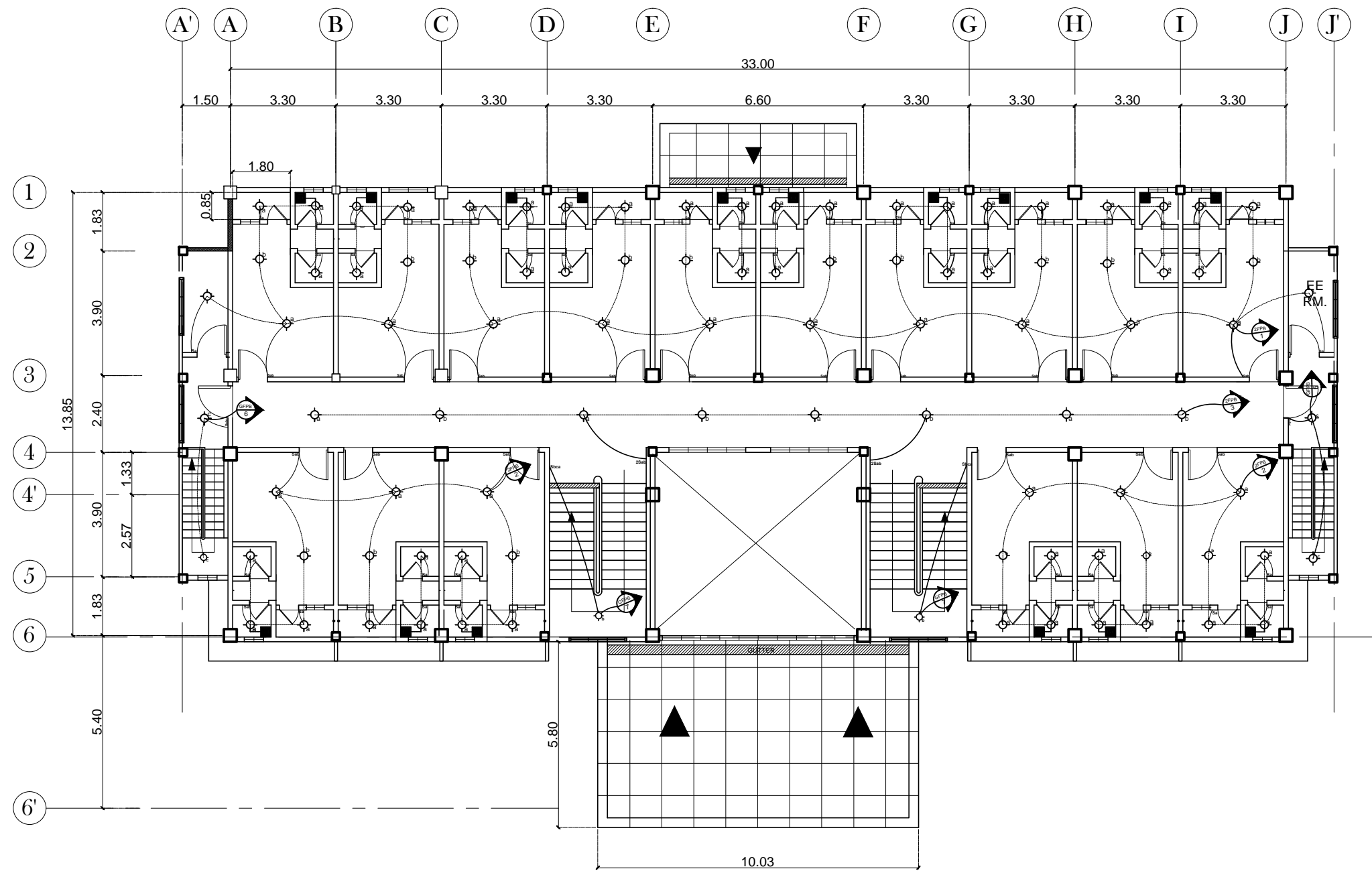
1  
 E1 SCALE 1:150MTS

OWNER:	Project Title:	Prepared by:	Recommending approval by:	Approved by:	Sheet Content:	Sheet No.
 Republic of the Philippines DEPARTMENT OF SCIENCE AND TECHNOLOGY Philippine Science High School MIMAROPA Region Campus Brgy. Rizal, Odiongan, Romblon 5505	<b>CONSTRUCTION          OF          DORMITORY BUILDING I</b>	<u>PLANNING TEAM</u>	<u>Meriam F. Fallar</u> FAD Chief	<u>Edward C. Albaracin</u> Campus Director	As Shown	E
	Location: Brgy. Rizal, Odiongan Romblon 5505	Date Prepared:	Date:	Date:		1



MEZZANINE FLOOR  
**LIGHTING LAYOUT**  
 1  
 E2 SCALE 1:150MTS

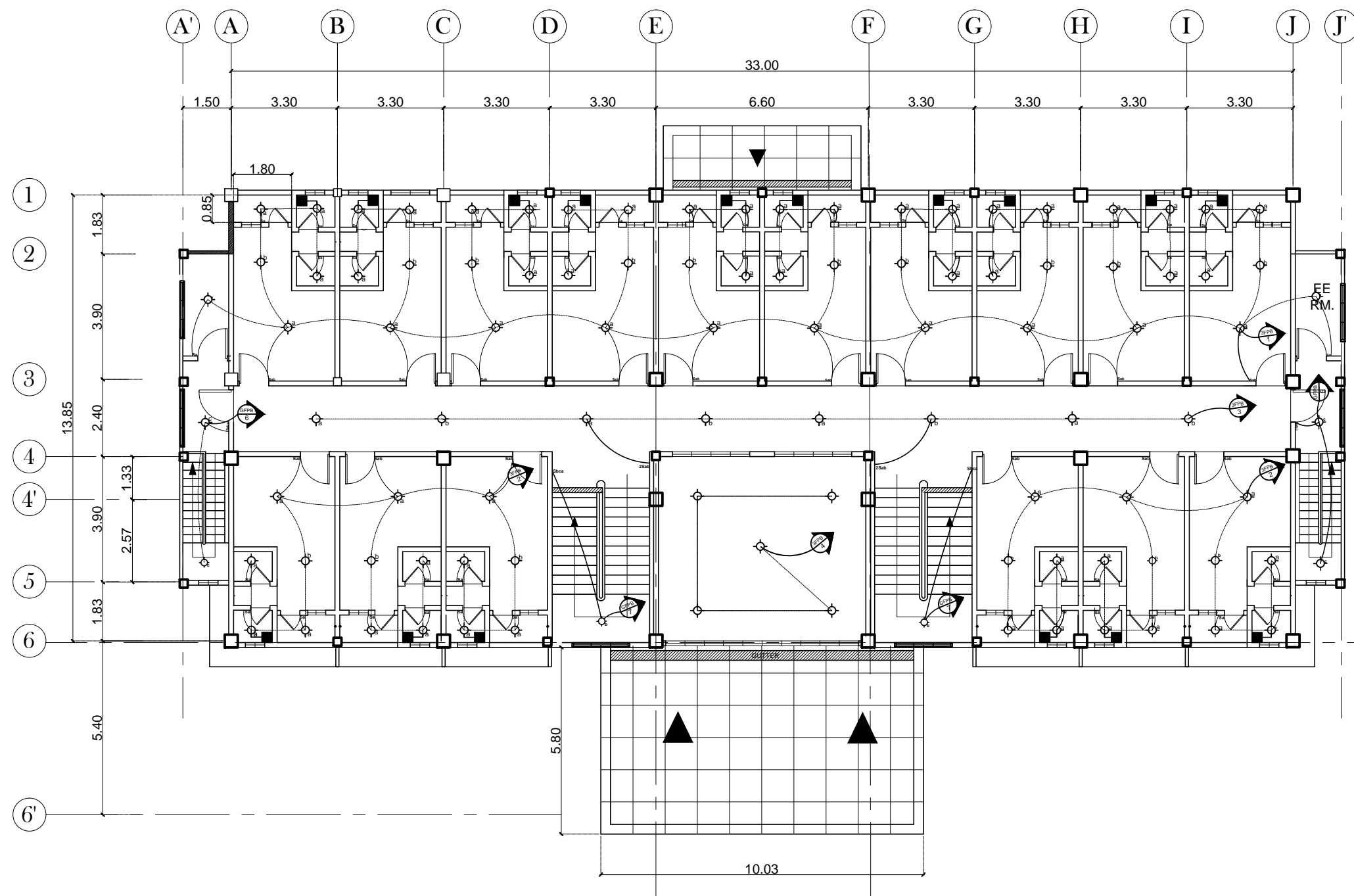
OWNER:	Project Title:	Prepared by:	Recommending approval by:	Approved by:	Sheet Content:	Sheet No.
Republic of the Philippines DEPARTMENT OF SCIENCE AND TECHNOLOGY Philippine Science High School MIMAROPA Region Campus Brgy. Rizal, Odiongan, Romblon 5505	<b>CONSTRUCTION OF DORMITORY BUILDING I</b>	<b>PLANNING TEAM</b>	<b>Meriam F. Fallar</b> FAD Chief	<b>Edward C. Albaracin</b> Campus Director	As Shown	E
	Location: Brgy. Rizal, Odiongan Romblon 5505	Date Prepared:	Date:	Date:		2   13



2ND FLOOR  
**LIGHTING LAYOUT**

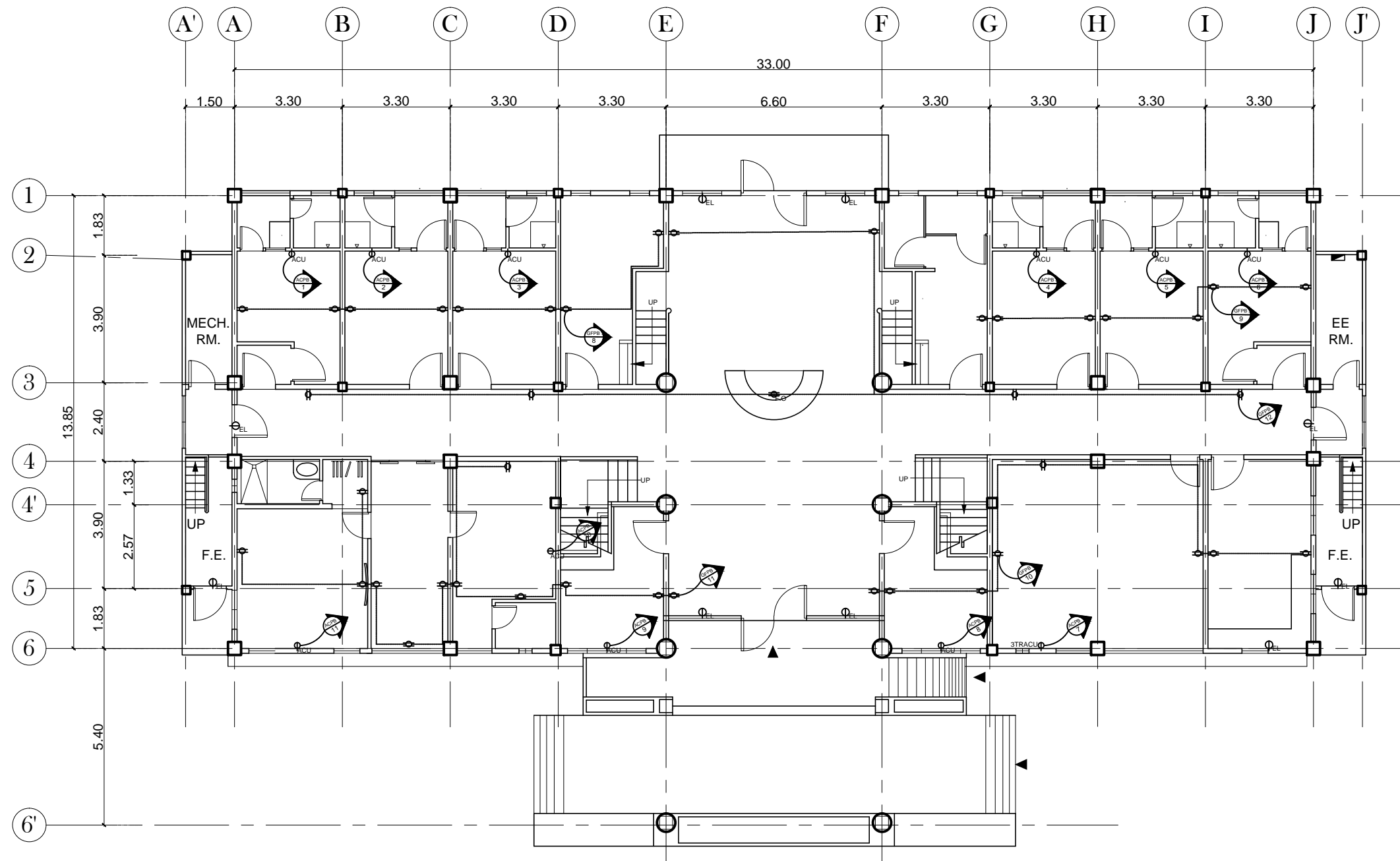
1  
 E3 SCALE 1:150MTS

OWNER:	Project Title:	Prepared by:	Recommending approval by:	Approved by:	Sheet Content:	Sheet No.
Republic of the Philippines DEPARTMENT OF SCIENCE AND TECHNOLOGY Philippine Science High School MIMAROPA Region Campus Brgy. Rizal, Odiongan, Romblon 5505	<b>CONSTRUCTION          OF          DORMITORY BUILDING I</b>	<b>PLANNING TEAM</b>	<u>Meriam F. Fallar</u> FAD Chief	<u>Edward C. Albaracin</u> Campus Director	As Shown	E
	Location: Brgy. Rizal, Odiongan Romblon 5505	Date Prepared:	Date:	Date:	Date:	3   13



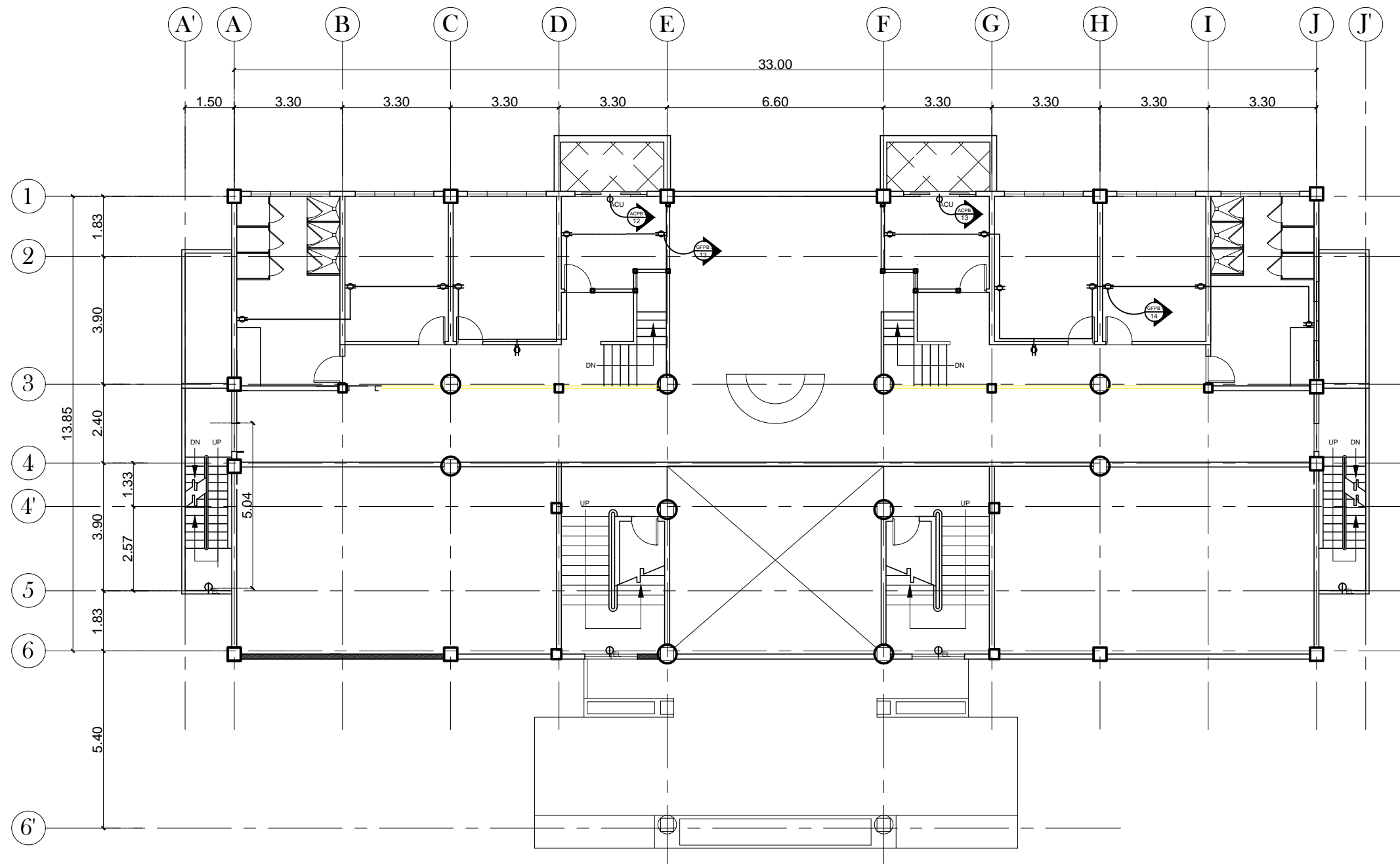
3RD FLOOR  
**1 LIGHTING LAYOUT**  
 E4 SCALE 1:150MTS

OWNER:	Project Title:	Prepared by:	Recommending approval by:	Approved by:	Sheet Content:	Sheet No.
Republic of the Philippines DEPARTMENT OF SCIENCE AND TECHNOLOGY Philippine Science High School MIMAROPA Region Campus Brgy. Rizal, Odiongan, Romblon 5505	<b>CONSTRUCTION OF DORMITORY BUILDING I</b>	<u>PLANNING TEAM</u>	<u>Meriam F. Fallar</u> FAD Chief	<u>Edward C. Albaracin</u> Campus Director	As Shown	E
	Location: Brgy. Rizal, Odiongan Romblon 5505	Date Prepared:	Date:	Date:		4   13



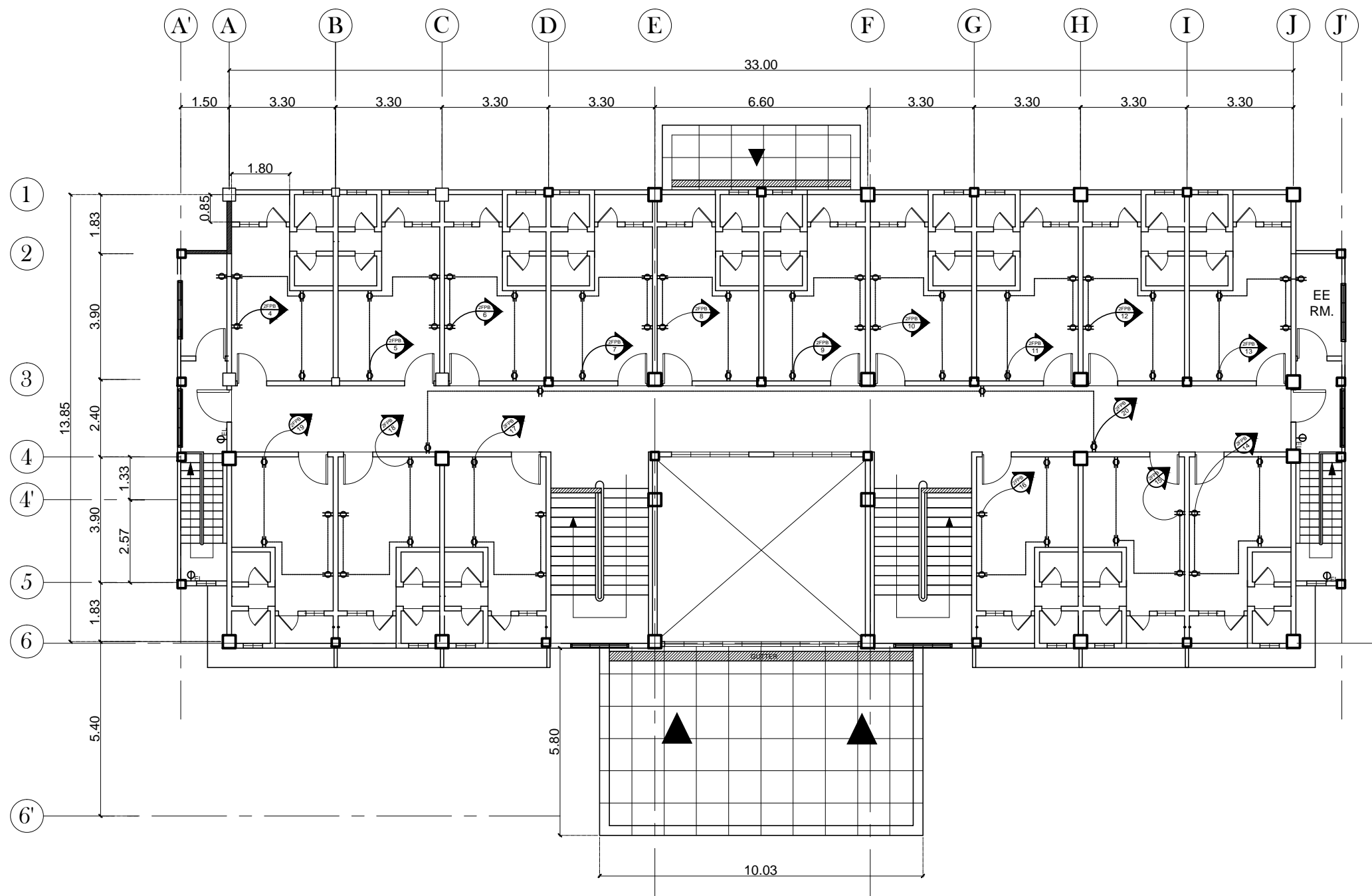
GROUND FLOOR  
**POWER LAYOUT**  
 1  
 E5 SCALE 1:150MTS

OWNER:	Project Title:	Prepared by:	Recommending approval by:	Approved by:	Sheet Content:	Sheet No.
Republic of the Philippines DEPARTMENT OF SCIENCE AND TECHNOLOGY Philippine Science High School MIMAROPA Region Campus Brgy. Rizal, Odiongan, Romblon 5505	<b>CONSTRUCTION          OF          DORMITORY BUILDING I</b>	<u>PLANNING TEAM</u>	<u>Meriam F. Fallar</u> FAD Chief	<u>Edward C. Albaracin</u> Campus Director	As Shown	E
	Location: Brgy. Rizal, Odiongan Romblon 5505	Date Prepared:	Date:	Date:		5



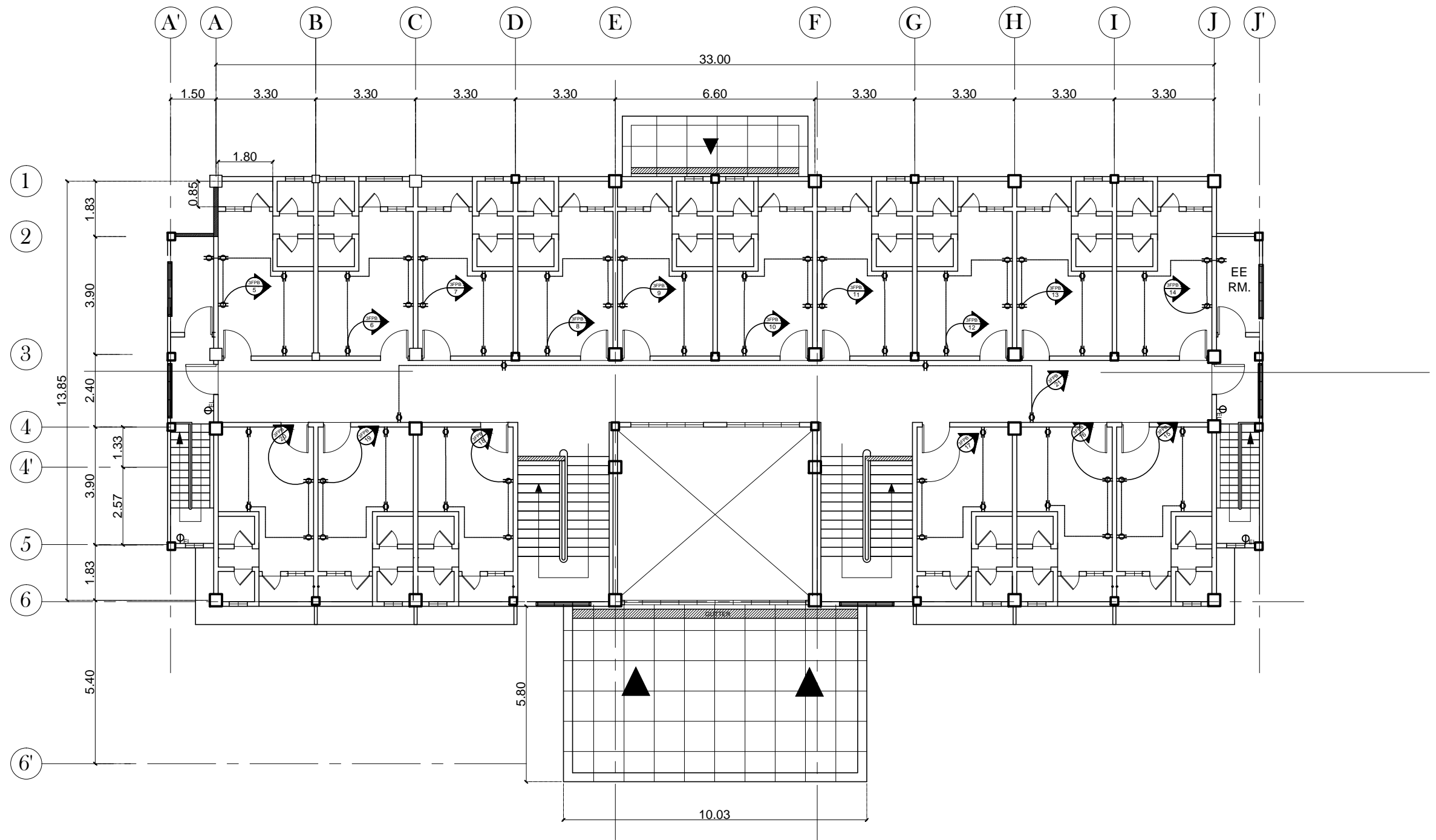
MEZZANINE FLOOR  
**POWER LAYOUT**  
 1  
 E6 SCALE 1:150MTS

OWNER:	Project Title:	Prepared by:	Recommending approval by:	Approved by:	Sheet Content:	Sheet No.
Republic of the Philippines DEPARTMENT OF SCIENCE AND TECHNOLOGY Philippine Science High School MIMAROPA Region Campus Brgy. Rizal, Odiongan, Romblon 5505	<b>CONSTRUCTION          OF          DORMITORY BUILDING I</b>	<b>PLANNING TEAM</b>	<b>Meriam F. Fallar</b> FAD Chief	<b>Edward C. Albaracin</b> Campus Director	As Shown	<b>E</b>
	Location: Brgy. Rizal, Odiongan Romblon 5505	Date Prepared:	Date:	Date:		6   13



2ND FLOOR  
**POWER LAYOUT**  
 1  
 E7 SCALE 1:150MTS

OWNER:	Project Title:	Prepared by:	Recommending approval by:	Approved by:	Sheet Content:	Sheet No.
Republic of the Philippines DEPARTMENT OF SCIENCE AND TECHNOLOGY Philippine Science High School MIMAROPA Region Campus Brgy. Rizal, Odiongan, Romblon 5505	<b>CONSTRUCTION OF DORMITORY BUILDING I</b>	<u>PLANNING TEAM</u>	<u>Meriam F. Fallar</u> FAD Chief	<u>Edward C. Albaracin</u> Campus Director	As Shown	E
	Location: Brgy. Rizal, Odiongan Romblon 5505	Date Prepared:	Date:	Date:		7   13



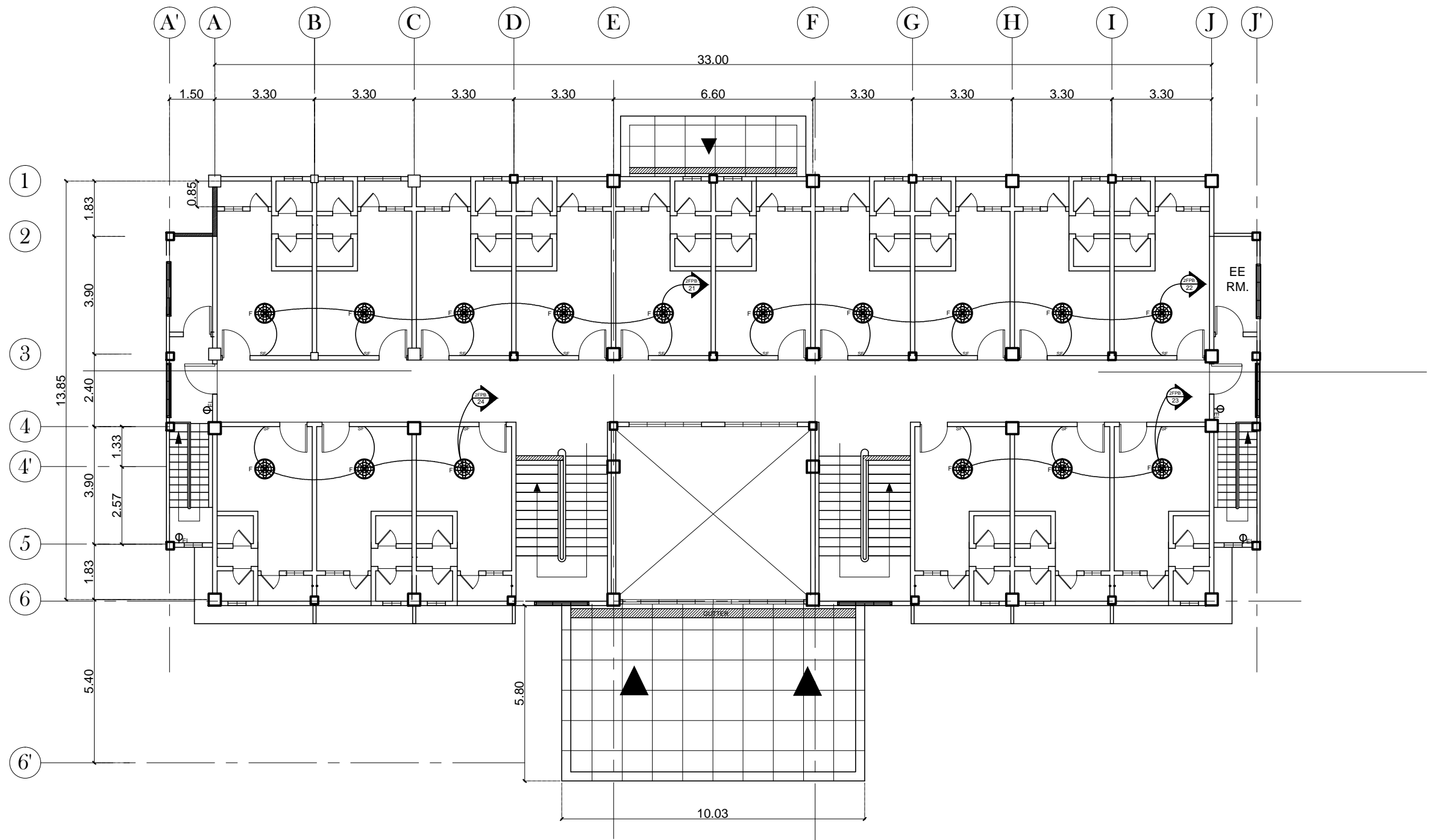
3RD FLOOR  
**POWER LAYOUT**

1  
 E8

SCALE 1:150MTS

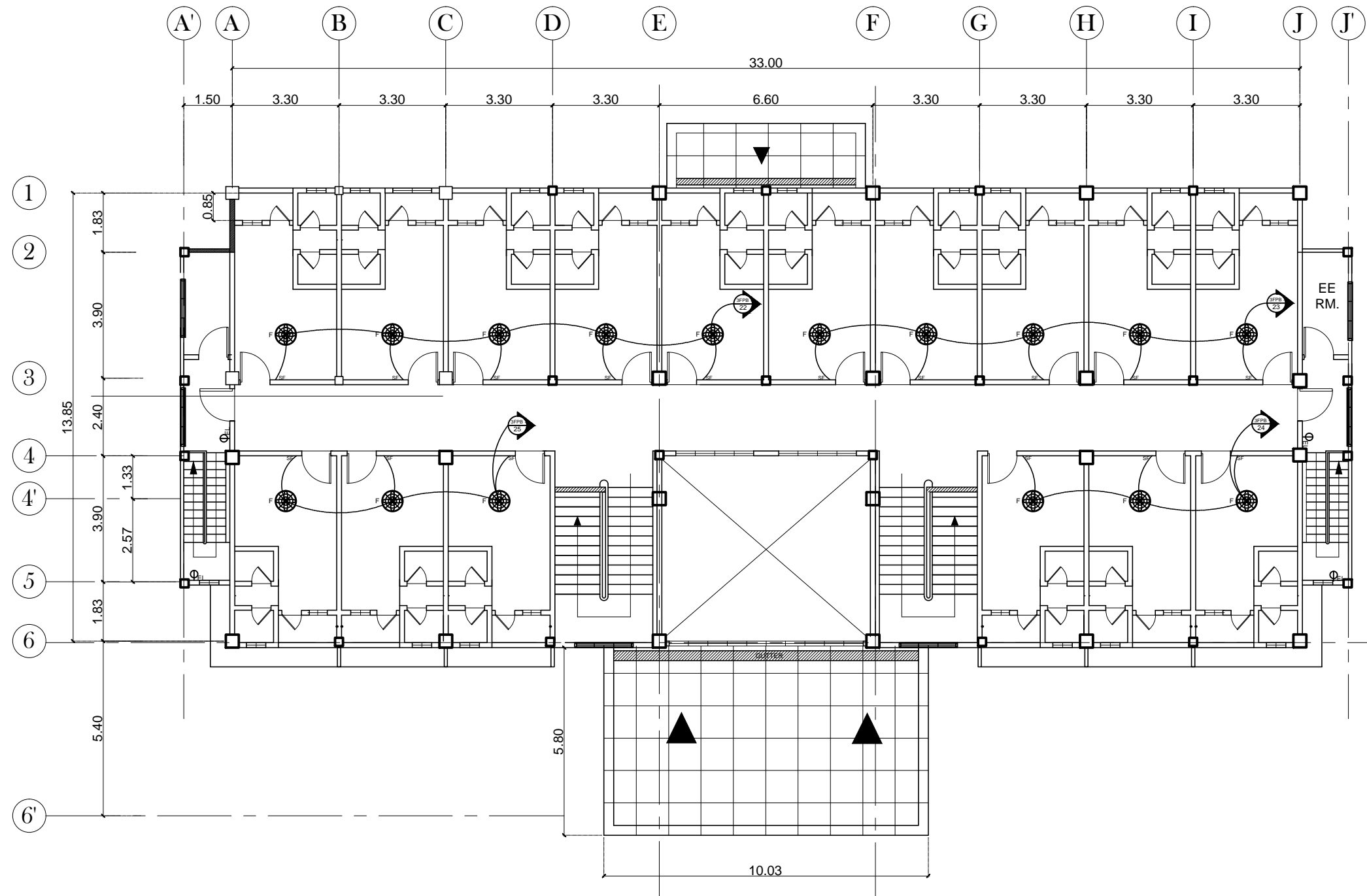
OWNER:	Project Title:	Prepared by:	Recommending approval by:	Approved by:	Sheet Content:	Sheet No.
Republic of the Philippines DEPARTMENT OF SCIENCE AND TECHNOLOGY Philippine Science High School MIMAROPA Region Campus Brgy. Rizal, Odiongan, Romblon 5505	<b>CONSTRUCTION OF DORMITORY BUILDING I</b>	<u>PLANNING TEAM</u>	<u>Meriam F. Fallar</u> FAD Chief	<u>Edward C. Albaracin</u> Campus Director	As Shown	E
	Location: Brgy. Rizal, Odiongan Romblon 5505	Date Prepared:	Date:	Date:		8   13





2ND FLOOR - CEILING FAN  
**POWER LAYOUT**  
 1  
 E9 SCALE 1:150MTS

OWNER:	Project Title:	Prepared by:	Recommending approval by:	Approved by:	Sheet Content:	Sheet No.
Republic of the Philippines DEPARTMENT OF SCIENCE AND TECHNOLOGY Philippine Science High School MIMAROPA Region Campus Brgy. Rizal, Odiongan, Romblon 5505	<b>CONSTRUCTION OF DORMITORY BUILDING I</b>	<u>PLANNING TEAM</u>	<u>Meriam F. Fallar</u> FAD Chief	<u>Edward C. Albaracin</u> Campus Director	As Shown	E
	Location: Brgy. Rizal, Odiongan Romblon 5505	Date Prepared:	Date:	Date:		9




3RD FLOOR - CEILING FAN

# POWER LAYOUT

1  
E10

SCALE

1:150MTS

OWNER:	Project Title:	Prepared by:	Recommending approval by:	Approved by:	Sheet Content:	Sheet No.
 Republic of the Philippines DEPARTMENT OF SCIENCE AND TECHNOLOGY Philippine Science High School MIMAROPA Region Campus Brgy. Rizal, Odiongan, Romblon 5505	<b>CONSTRUCTION OF DORMITORY BUILDING I</b>	<b>PLANNING TEAM</b>	<b>Meriam F. Fallar</b> FAD Chief	<b>Edward C. Albaracin</b> Campus Director	As Shown	E
	Location: Brgy. Rizal, Odiongan Romblon 5505	Date Prepared:	Date:	Date:		10   13

PANEL NAME: MDP				PANEL MOUNTING: WALL MOUNTED							
CKT No.	LOAD DESCRIPTION	VOLTAGE (V)	AMPERES (A)	CIRCUIT PROTECTION			CONDUCTOR			MIN. CONDUIT	
				POLE	AT	AF	Size	Ground	Type	Size	Type
1	GFPB	230	61.28	3	60	100	22mm <sup>2</sup>	5.5mm <sup>2</sup>	THHN	32mm	IMC
2	2FPB	230	48.67	3	80	100	22mm <sup>2</sup>	5.5mm <sup>2</sup>	THHN	32mm	IMC
3	3FPB	230	49.93	3	80	100	22mm <sup>2</sup>	5.5mm <sup>2</sup>	THHN	32mm	IMC
4	ACPB	230	46.47	3	115	200	30mm <sup>2</sup>	5.5mm <sup>2</sup>	THHN	50mm	IMC
5	SPARE	230		3	60	100					
6	SPARE	230		3	60	100					
TOTAL			206.35								

**USE:**  
3 - 60 mm<sup>2</sup> THW Wire @ 60mmØ PVC Pipe  
225AT, 3 POLE, 3φ, 60Hz, 230V, MCCB

PANEL NAME: ACPB				PANEL MOUNTING: WALL MOUNTED										
CKT No.	LOAD DESCRIPTION	TOTAL LOAD (VA)	VOLTAGE (V)	PHASE CURRENT(A)			CIRCUIT PROTECTION			CONDUCTOR			MIN. CONDUIT	
				AB	AB	AB	POLE	AT	AF	Size	Ground	Type	Size	Type
ACPB-1	SPLIT TYPE AIRCONDITIONG UNIT (1HP)	746	230	3.24			2	20	40	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
ACPB-2	SPLIT TYPE AIRCONDITIONG UNIT (1HP)	746	230			3.24	2	20	40	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
ACPB-3	SPLIT TYPE AIRCONDITIONG UNIT (1HP)	746	230		3.24		2	20	40	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
ACPB-4	SPLIT TYPE AIRCONDITIONG UNIT (1HP)	746	230	3.24			2	20	40	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
ACPB-5	SPLIT TYPE AIRCONDITIONG UNIT (1HP)	746	230			3.24	2	20	40	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
ACPB-6	SPLIT TYPE AIRCONDITIONG UNIT (1HP)	746	230			3.24	2	20	40	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
ACPB-7	3TR SPLIT TYPE AIRCONDITIONG UNIT	4520	230		19.65		2	30	60	5.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
ACPB-8	SPLIT TYPE AIRCONDITIONG UNIT (1HP)	746	230	3.24			2	20	40	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	25mm	PVC
ACPB-9	SPLIT TYPE AIRCONDITIONG UNIT (2HP)	1500	230	6.52			2	20	40	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	25mm	PVC
ACPB-10	SPLIT TYPE AIRCONDITIONG UNIT (2HP)	1500	230			6.52	2	20	40	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	25mm	PVC
ACPB-11	SPLIT TYPE AIRCONDITIONG UNIT (1HP)	746	230			3.24	2	20	40	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	25mm	PVC
ACPB-12	SPLIT TYPE AIRCONDITIONG UNIT (1HP)	746	230	3.24			2	20	40	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	25mm	PVC
ACPB-13	SPLIT TYPE AIRCONDITIONG UNIT (1HP)	746	230		3.24		2	20	40	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	25mm	PVC
ACPB-14	WATER PUMP 1.5HP	1200	230			5.22	2	30	60	5.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	25mm	PVC
ACPB-15	WATER PUMP 1.5HP	1200	230	5.22			2	30	60	5.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	25mm	PVC
ACPB-16	SPARE		230				3	30	60					
TOTAL		17380		24.70	26.13	24.70								

**DESIGN COMPUTATION:**

- Total Net Computed Load = 17380+25%(4520) = 18510VA
- Total Full Load Current (FLA):  
FLA = (18510)/(1.732x230)  
FLA = 46.47 Amperes
- Size of Main Wires Table 3.10.1.16  
Use: 3 - 30 mm<sup>2</sup> THW Wire @ 32mmØ IMC Pipe
- Feeder Maximum Current Rating of Protective Device. Table 4.30.4.2 of the Philippine Electrical Code
  - Non Time Delay Fuse = (46.47A+(300%)(19.65A)) = 105.42 Ampere Trip
  - Inverse Time Circuit Breaker = (46.47A+(250%)(19.65A)) = 95.60 Ampere Trip
 Use: 115AT, 3 POLE, 3φ, 60Hz, 230V, MCCB


PANEL NAME: GFPB				PANEL MOUNTING: WALL MOUNTED										
CKT No.	LOAD DESCRIPTION	TOTAL LOAD (VA)	VOLTAGE (V)	PHASE CURRENT(A)			CIRCUIT PROTECTION			CONDUCTOR			MIN. CONDUIT	
				AB	AB	AB	POLE	AT	AF	Size	GROUND	TYPE	Size	Type
GFPB-1	LIGHTING & EXHAUST FAN	3180	230			13.83	2	20	30	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
GFPB-2	LIGHTING & EXHAUST FAN	2120	230			9.23	2	20	30	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
GFPB-3	LIGHTING & EXHAUST FAN	2840	230	12.35			2	20	30	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
GFPB-4	LIGHTING (Hallway)	1300	230	5.65			2	20	30	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
GFPB-5	FIRE EXIT LIGHTING	600	230		2.60		2	15	30	2.0mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
GFPB-6	FIRE EXIT LIGHTING	600	230		2.60		2	15	30	2.0mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
GFPB-7	MAIN STAIR LIGHTING	600	230		2.60		2	15	30	2.0mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
GFPB-8	CONVENIENCE OUTLET	1440	230	6.26			2	30	60	5.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	25mm	PVC
GFPB-9	CONVENIENCE OUTLET	1260	230	5.48			2	30	60	5.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	25mm	PVC
GFPB-10	CONVENIENCE OUTLET	1440	230		6.26		2	30	60	5.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	25mm	PVC
GFPB-11	CONVENIENCE OUTLET	2160	230		9.39		2	30	60	5.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	25mm	PVC
GFPB-12	CONVENIENCE OUTLET	1260	230	5.48			2	30	60	5.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	25mm	PVC
GFPB-13	CONVENIENCE OUTLET	1260	230		5.48		2	30	60	5.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	25mm	PVC
GFPB-14	CONVENIENCE OUTLET	1440	230		6.26		2	30	60	5.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	25mm	PVC
GFPB-15	EMERGENCY LIGHT	1400	230			6.10	2	20	60	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
GFPB-16	FACP	1500	230	6.52			3	30	60	5.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
GFPB-17	SPARE		230				3	30	60					
TOTAL		24400		41.74	35.19	34.64								

**DESIGN COMPUTATION:**

- Total Net Computed Load = 24400+25%(40) = 24410 VA
- Total Full Load Current (FLA):  
FLA = (24410)/(1.732x230)  
FLA = 61.28 Amperes
- Size of Main Wires Table 3.10.1.16  
Use: 3 - 22 mm<sup>2</sup> THW Wire @ 32mmØ IMC Pipe
- Feeder Maximum Current Rating of Protective Device. Table 4.30.4.2 of the Philippine Electrical Code
  - Non Time Delay Fuse = (61.23A+(300%)(0.17A)) = 61.74 Ampere Trip
  - Inverse Time Circuit Breaker = (61.23A+(250%)(0.17)) = 61.66 Ampere Trip
 Use: 70AT, 3 POLE, 3φ, 60Hz, 230V, MCCB

## MDP, GFPB, & ACPB SCHEDULE OF LOADS

SCALE \_\_\_\_\_ NTS

<b>OWNER:</b>	<b>Project Title:</b>	<b>Prepared by:</b>	<b>Recommending approval by:</b>	<b>Approved by:</b>	<b>Sheet Content:</b>	<b>Sheet No.</b>
 Republic of the Philippines DEPARTMENT OF SCIENCE AND TECHNOLOGY Philippine Science High School MIMAROPA Region Campus Brgy. Rizal, Odiongan, Romblon 5505	<b>CONSTRUCTION OF DORMITORY BUILDING I</b>	<u>PLANNING TEAM</u>	<u>Meriam F. Fallar</u> FAD Chief	<u>Edward C. Albaracin</u> Campus Director	As Shown	E
	Location: Brgy. Rizal, Odiongan Romblon 5505	Date Prepared:	Date:	Date:		11   13

PANEL NAME: 2FPB				PANEL MOUNTING: WALL MOUNTED										
CKT No.	LOAD DESCRIPTION	TOTAL LOAD (VA)	VOLTAGE (V)	PHASE CURRENT(A)			CIRCUIT PROTECTION			CONDUCTOR			MIN. CONDUIT	
				AB	BC	CA	POLE	AT	AF	Size	Ground	Type	Size	Type
2FPB-1	LIGHTING & EXHAUST FAN	1984	230	8.63			2	20	40	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
2FPB-2	LIGHTING & EXHAUST FAN	1152	230		5		2	20	40	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
2FPB-3	LIGHTING (HALLWAY)	256	230			1.11	2	20	40	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
2FPB-4	DORMER ROOM 1	900	230			3.91	2	20	40	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
2FPB-5	DORMER ROOM 2	720	230	3.13			2	20	40	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
2FPB-6	DORMER ROOM 3	720	230			3.13	2	20	40	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
2FPB-7	DORMER ROOM 4	720	230	3.13			2	20	40	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
2FPB-8	DORMER ROOM 5	720	230		3.13		2	20	40	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	25mm	PVC
2FPB-9	DORMER ROOM 6	720	230			3.13	2	20	40	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
2FPB-10	DORMER ROOM 7	720	230	3.13			2	20	40	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
2FPB-11	DORMER ROOM 8	720	230			3.13	2	20	40	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
2FPB-12	DORMER ROOM 9	720	230		3.13		2	20	40	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
2FPB-13	DORMER ROOM 10	900	230	3.91			2	20	40	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
2FPB-14	DORMER ROOM 11	720	230		3.13		2	20	40	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
2FPB-15	DORMER ROOM 12	720	230			3.13	2	20	40	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
2FPB-16	DORMER ROOM 13	720	230	3.13			2	20	40	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
2FPB-17	DORMER ROOM 14	720	230		3.13		2	20	40	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
2FPB-18	DORMER ROOM 15	720	230			3.13	2	20	40	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
2FPB-19	DORMER ROOM 16	720	230		3.13		2	20	40	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
2FPB-20	CONVENIENCE OUTLET	720	230			3.13	2	20	40	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
2FPB-21	CEILING FAN	800	230		3.48		2	20	40	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
2FPB-22	CEILING FAN	800	230			3.48	2	20	40	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
2FPB-23	CEILING FAN	800	230		3.48		2	40	60	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
2FPB-24	CEILING FAN	800	230			3.48	2	40	60	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
2FPB-25	SPARE		230				3	40	60	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
2FPB-26	SPARE		230				3	40	60	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
	TOTAL	19192		25.06	27.61	30.76								

**DESIGN COMPUTATION:**

- Total Net Computed Load = 19192+25%(800) = 19392 VA
- Total Full Load Current (FLA):  
 $FLA = \frac{19392}{(1.732 \times 230)}$   
**FLA = 48.67 Amperes**
- Size of Main Wires Table 3.10.1.16  
**Use: 3 - 22 mm<sup>2</sup> THW Wire @ 32mmØ IMC Pipe**

4. Feeder Maximum Current Rating of Protective Device.  
 Table 4.30.4.2 of the Philippine Electrical Code

**a. Non Time Delay Fuse** =  $\frac{48.67 + (300\%)(3.48A)}{}$   
 = **59.11 Ampere Trip**

**b. Inverse Time Circuit Breaker** =  $\frac{48.67A + (250\%)(3.48A)}{}$   
 = **57.37 Ampere Trip**  
**Use: 60AT, 3 POLE, 3φ, 60Hz, 230V, MCCB**

PANEL NAME: 3FPB				PANEL MOUNTING: WALL MOUNTED										
CKT No.	LOAD DESCRIPTION	TOTAL LOAD (VA)	VOLTAGE (V)	PHASE CURRENT(A)			CIRCUIT PROTECTION			CONDUCTOR			MIN. CONDUIT	
				AB	BC	CA	POLE	AT	AF	Size	Ground	Type	Size	Type
3FPB-1	LIGHTING & EXHAUST FAN	1984	230	8.63			2	20	40	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
3FPB-2	LIGHTING & EXHAUST FAN	1152	230		5.0		2	20	40	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
3FPB-3	LIGHTING (HALLWAY)	256	230			1.11	2	20	40	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
3FPB-4	LIGHTING (LOBBY)	500	230		2.17		2	20	40	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
3FPB-5	DORMER ROOM 1	900	230			3.91	2	20	40	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
3FPB-6	DORMER ROOM 2	720	230	3.13			2	20	40	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
3FPB-7	DORMER ROOM 3	720	230			3.13	2	20	40	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
3FPB-8	DORMER ROOM 4	720	230	3.13			2	20	40	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	25mm	PVC
3FPB-9	DORMER ROOM 5	720	230		3.13		2	20	40	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
3FPB-10	DORMER ROOM 6	720	230			3.13	2	20	40	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
3FPB-11	DORMER ROOM 7	720	230	3.13			2	20	40	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
3FPB-12	DORMER ROOM 8	720	230			3.13	2	20	40	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
3FPB-13	DORMER ROOM 9	720	230	3.13			2	20	40	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
3FPB-14	DORMER ROOM 10	900	230		3.91		2	20	40	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
3FPB-15	DORMER ROOM 11	720	230			3.13	2	20	40	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
3FPB-16	DORMER ROOM 12	720	230	3.13			2	20	40	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
3FPB-17	DORMER ROOM 13	720	230			3.13	2	20	40	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
3FPB-18	DORMER ROOM 14	720	230	3.13			2	20	40	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
3FPB-19	DORMER ROOM 15	720	230		3.13		2	20	40	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
3FPB-20	DORMER ROOM 16	720	230			3.13	2	20	40	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
3FPB-21	CONVENIENCE OUTLET	720	230	3.13			2	20	40	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
3FPB-22	CEILING FAN	800	230		3.48		2	20	40	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
3FPB-23	CEILING FAN	800	230			3.48	2	20	40	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
3FPB-24	CEILING FAN	800	230		3.48		2	20	40	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
3FPB-25	CEILING FAN	800	230			3.48	2	20	40	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
3FPB-26	SPARE		230				3	40	60	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
3FPB-27	SPARE		230				3	40	60	3.5mm <sup>2</sup>	2.0mm <sup>2</sup>	THHN	20mm	PVC
	TOTAL	19692		30.54	24.3	32.37								

**DESIGN COMPUTATION:**


- Total Net Computed Load = 19692+25%(800) = 19892 VA
- Total Full Load Current (FLA):  
 $FLA = \frac{19892}{(1.732 \times 230)}$   
**FLA = 49.93 Amperes**
- Size of Main Wires Table 3.10.1.16  
**Use: 3 - 22 mm<sup>2</sup> THW Wire @ 32mmØ IMC Pipe**

4. Feeder Maximum Current Rating of Protective Device.  
 Table 4.30.4.2 of the Philippine Electrical Code

**a. Non Time Delay Fuse** =  $\frac{49.93A + (300\%)(3.48A)}{}$   
 = **60.37 Ampere Trip**

**b. Inverse Time Circuit Breaker** =  $\frac{49.93A + (250\%)(3.48A)}{}$   
 = **58.63 Ampere Trip**  
**Use: 60AT, 3 POLE, 3φ, 60Hz, 230V, MCCB**

## 2FPB, & 3FPB SCHEDULE OF LOADS

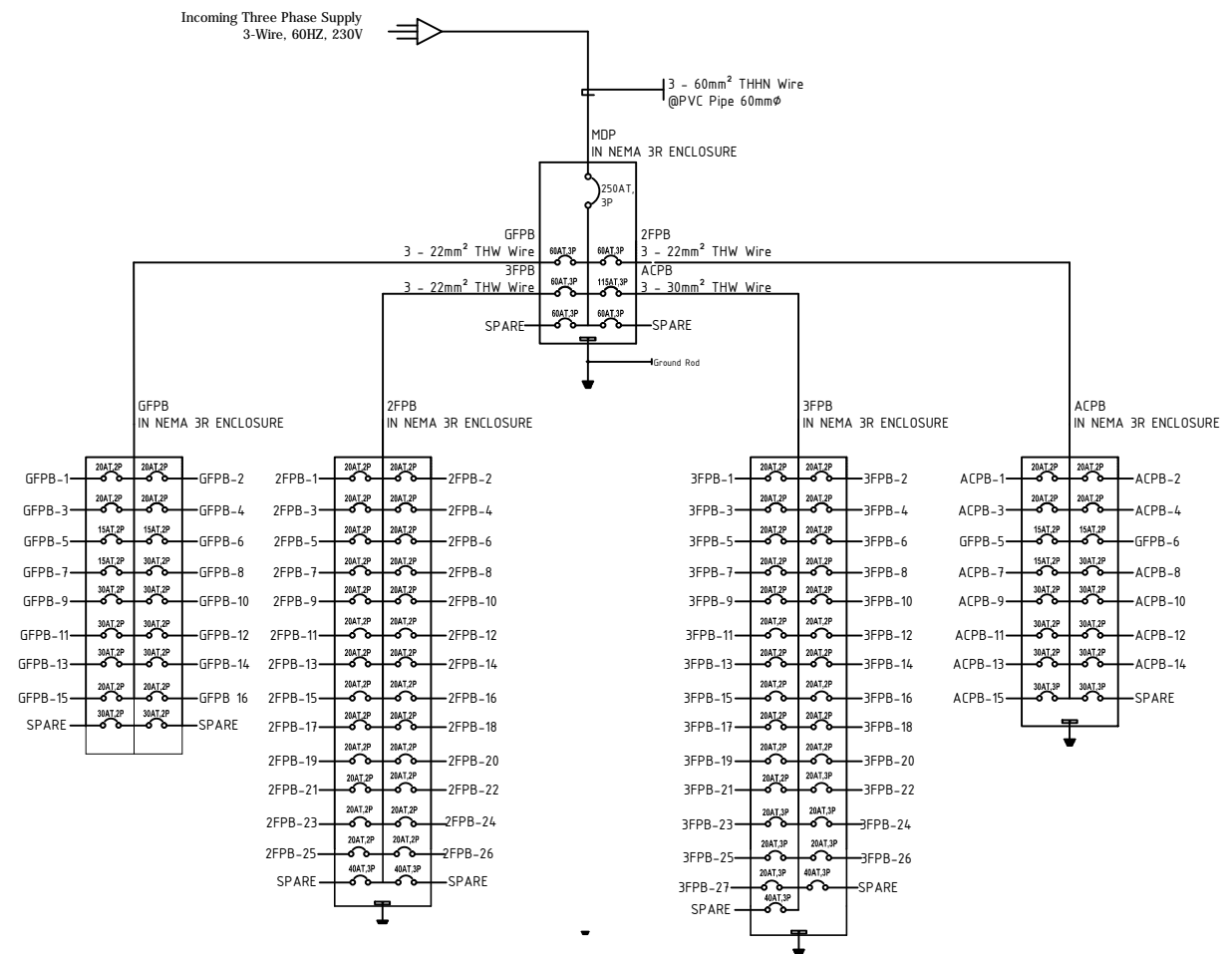
OWNER:	Project Title:	Prepared by:	Recommending approval by:	Approved by:	Sheet Content:	Sheet No.
 Republic of the Philippines DEPARTMENT OF SCIENCE AND TECHNOLOGY Philippine Science High School MIMAROPA Region Campus Brgy. Rizal, Odiongan, Romblon 5505	<b>CONSTRUCTION OF DORMITORY BUILDING I</b>	<u>PLANNING TEAM</u>	<u>Meriam F. Fallar</u> FAD Chief	<u>Edward C. Albaracin</u> Campus Director	As Shown	E
	Location: Brgy. Rizal, Odiongan Romblon 5505	Date Prepared:	Date:	Date:		12   13

# GENERAL NOTES

- ALL ELECTRICAL WORKS HEREIN SHALL BE DONE IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS, THE APPLICABLE PROVISIONS OF THE LATEST EDITION OF THE PHILIPPINE ELECTRICAL CODE, THE RULES AND REGULATIONS OF THE LOCAL ENFORCING AUTHORITY AND THE REQUIREMENTS OF THE LOCAL POWER AND TELEPHONE COMPANIES. THE ELECTRICAL WORKS SHALL BE UNDER IMMEDIATE SUPERVISION OF A DULY LICENSED ELECTRICAL ENGINEER.
- POWER SERVICE TO THE BUILDING SHALL BE 230 VOLTS, 3-PHASE 60HZ, AC POWER SOURCE, 3-WIRE + 1-GROUND.
- ALL ELECTRICAL WIRING INSTALLATION SUCH AS LIGHTING, POWER, FIRE ALARM & CCTV SYSTEM TO BE USED SHALL BE POLYVINYL CHLORIDE (PVC) PIPE. " SCHEDULE 40 "
- UNLESS OTHERWISE SPECIFIED, THE MINIMUM SIZE OF WIRE SHALL BE 3.5mm<sup>2</sup> TW/THHN<sup>2</sup> & CONDUIT SHALL BE 20mmØ ELECT'L TRADE SIZE.
- ALL WIRE SHALL BE COPPER & THERMOPLASTIC INSULATED TYPE "THHN/THWN" UNLESS OTHERWISE INDICATED IN THE PLANS. AND SHALL BE MANUFACTURED BY PHELPS DODGE OR APPROVE EQUAL.
- ALL OUTLET BOXES SHALL BE GALVANIZED GAUGE NO. 16, DEEP TYPE WITH FACTORY KNOCKOUTS. COVER ALL JUNCTION BOXES (NO EXPOSED WIRE).
- PANELBOARDS SHALL BE OF DEAD-FRONT TYPE CONSTRUCTION W/ ADEQUATE WIRE SPACE, SURFACE MOUNTED, FINISHED IN INDUSTRIAL GREY ENAMEL OVER A COAT OR RUST INHIBITOR. MINIMUM THICKNESS SHALL BE 1.4mm (GA 16). CIRCUIT BREAKERS SHALL BE QUICK-MAKE, QUICK-BREAK, TRIP-FREE ON OVERLOAD AND SHORT-CIRCUIT CONDITION, BOLT-ON TYPE. ALL CIRCUIT BREAKERS & PANELBOARD SHALL BE "G.E OR SQUARE-D".
- ALL WIRING DEVICES SHALL BE "NATIONAL" OR APPROVED EQUAL.
- ALL MATERIALS TO BE USED SHALL BE BRAND NEW & MUST BE OF APPROVED TYPE FOR THE PARTICULAR LOCATION & PURPOSE INTENDED.
- PROVIDE GROUNDING SYSTEM TO ALL LIGHTING AND POWER CIRCUIT AS PER PHILIPPINE ELECTRICAL CODE REQUIREMENT.
- MOUNTING HEIGHTS ARE : (SUBJECT TO ARCHITECT'S APPROVAL)
  - A. LIGHT SWITCHES --- 1.20M ABOVE FLOOR FINISH
  - B. CONVENIENCE OUTLETS --- 0.30M ABOVE FLOOR FINISH
  - C. TELEPHONE OUTLETS --- 0.30M ABOVE FLOOR FINISH
  - D. PANELBOARD --- 1.40M ABOVE FLOOR FINISH
  - E. EMERGENCY LIGHT --- 0.30M BELOW CEILING LINE
  - F. DATA OUTLET --- 0.30M BELOW CEILING LINE
- PULLBOXES SHALL BE USED WHEN APPLICABLE FOR EASY PULLING OF WIRES AND SHALL BE ACCORDING TO CODE REQUIREMENT. ALL FLUORESCENT BALLAST SHALL BE HIGH POWER FACTOR, RAPID START, SPRINGLOADED LAMP HOLDER & ENCLOSED IN METALLIC BOX.
- PROVIDE FLEXIBLE METAL CONDUIT & SUFFICIENT MICA TUBE FROM JUNCTION BOXES TO LIGHTING FIXTURE.
- UPON COMPLETION OF ELECTRICAL CONSTRUCTION WORK, THE FOLLOWING TESTS SHALL BE PERFORMED BY THE CONTRACTOR INCLUSIVE OF THE INSTALLATION TO BE REPORTED IN DETAILS AND IN FORMS APPROVED BY THE OWNER'S REPRESENTATIVE:
  - A. INSULATION RESISTANCE TEST
  - B. GROUND RESISTANCE TEST
  - C. OPERATIONAL TEST

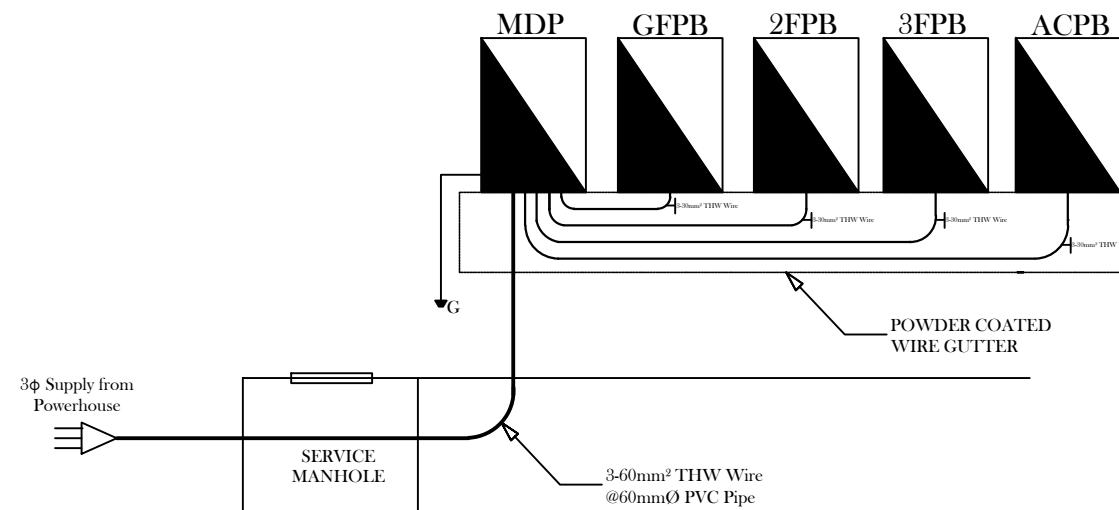
## LEGENDS & SYMBOLS

	PIN LIGHT 10 WATTS		CIRCUIT HOMERUN
	CONVENIENCE OUTLET		PANEL BOARD
	AIRCONDITION UNIT		POWER SERVICE ENTRANCE
	ONE GANG SWITCH		CIRCUIT BREAKER
	TWO GANG SWITCH		CIRCUITING
	THREE GANG SWITCH		SMOKE DETECTOR
	THREE GANG THREE WAY SWITCH		CONVENTIONAL MANUAL CALL POINT
	EMERGENCY LIGHT OUTLET		FIRE ALARM BELL
	WALL MOUNTED EXHAUST FAN		FIRE ALARM CONTROL PANEL
	CEILING MOUNTED EXHAUST FAN		FIRE ALARM CONDUIT LAYOUT



## SINGLE LINE DIAGRAM

SCALE NTS



## RISER DIAGRAM

SCALE NTS

OWNER:	Project Title:	Prepared by:	Recommending approval by:	Approved by:	Sheet Content:	Sheet No.
Republic of the Philippines DEPARTMENT OF SCIENCE AND TECHNOLOGY Philippine Science High School MIMAROPA Region Campus Brgy. Rizal, Odiongan, Romblon 5505	<b>CONSTRUCTION OF DORMITORY BUILDING I</b> Location: Brgy. Rizal, Odiongan Romblon 5505	PLANNING TEAM	Meriam F. Fallar FAD Chief	Edward C. Albaracin Campus Director	As Shown	E
		Date Prepared:	Date:	Date:		13   13