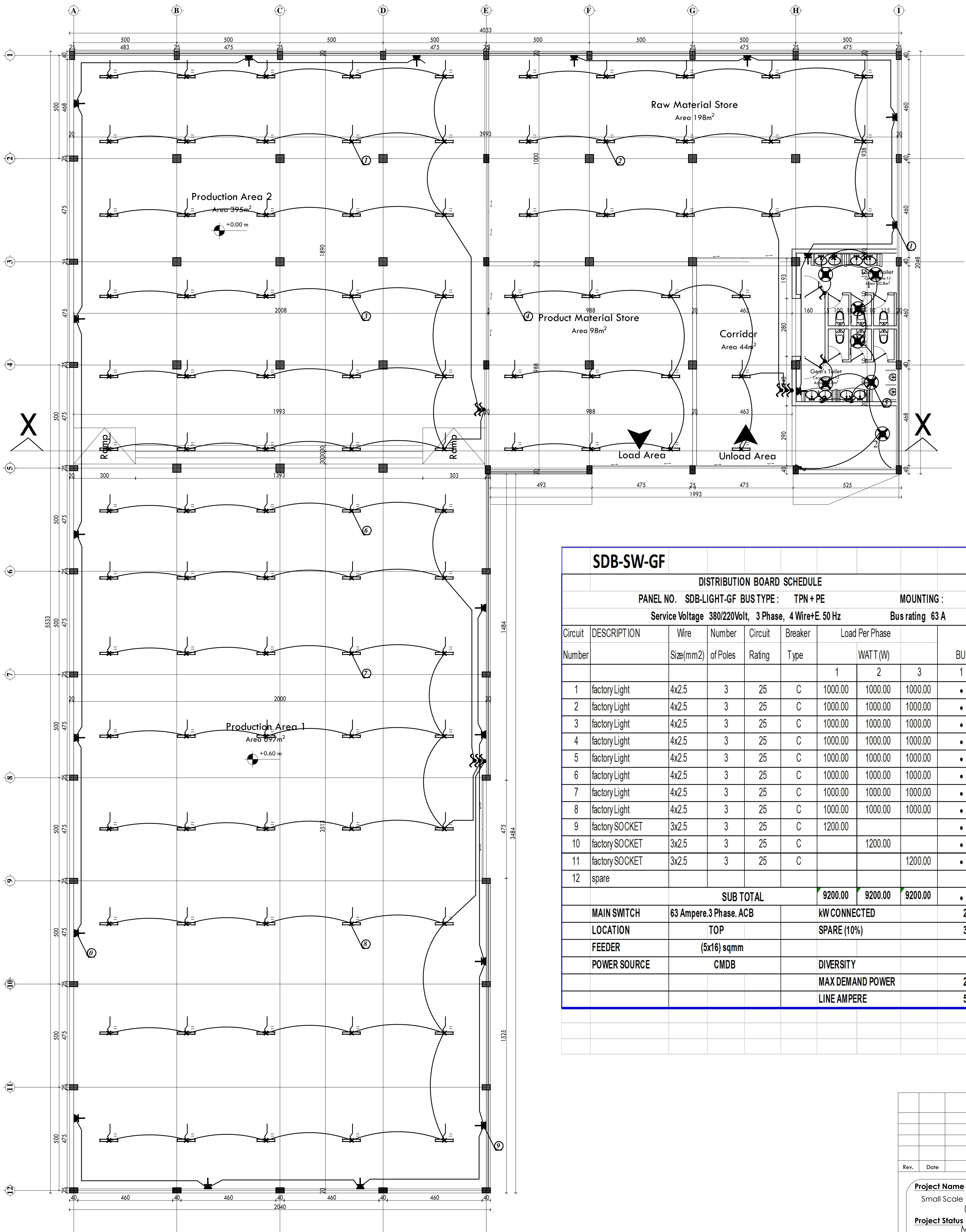


Site Plane Sc 1:500

Legend

- A- Factory & Store Building
- B- Office Building
- C- Toilet & Shower
- D- Guard House
- E- Green Area
- F- Parking
- G- Entrance Gate
- H- Load, Unload Space

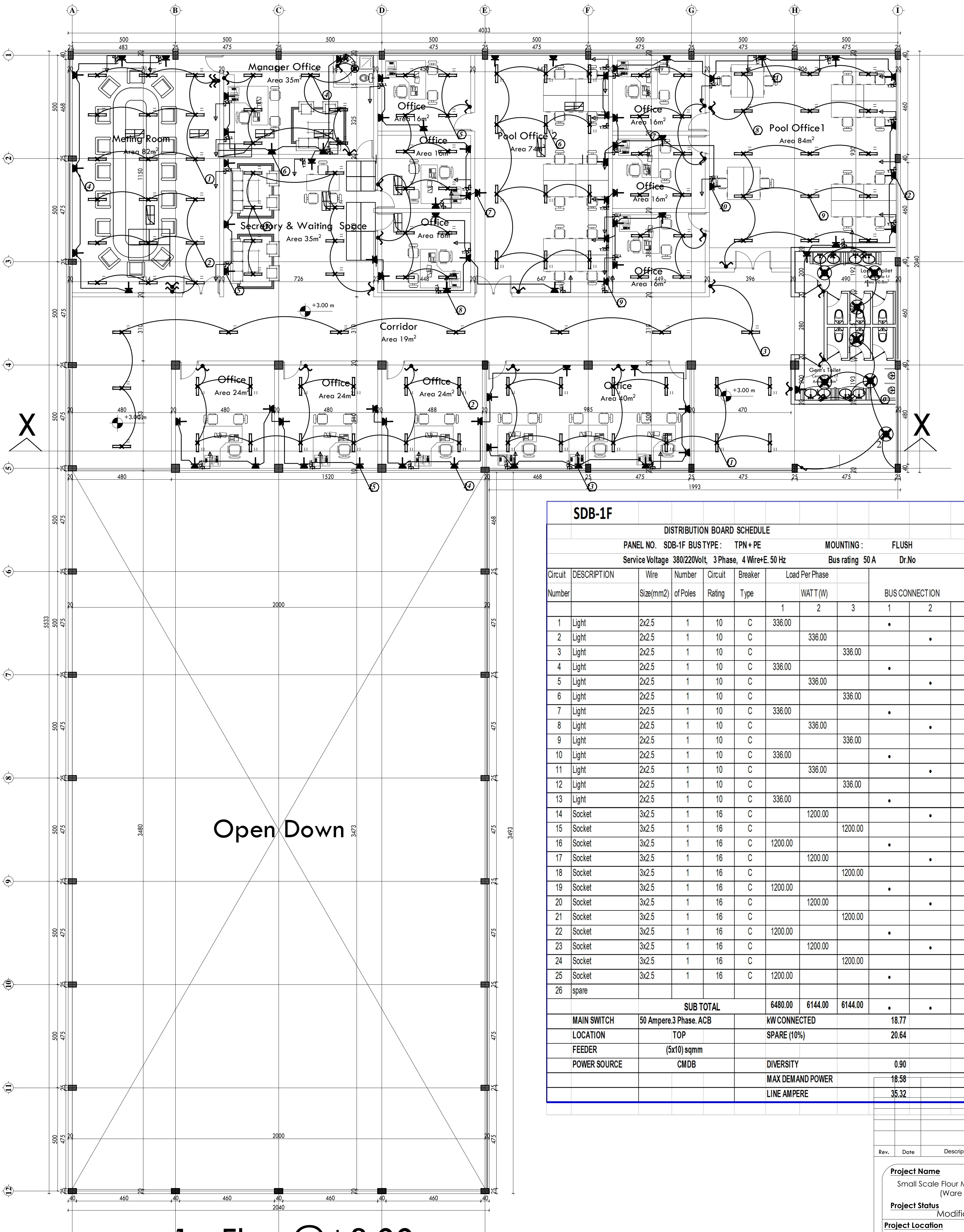
Rev.	Date	Description	Rev.by	Sign	
Project Name Small Scale Flour Milling Plant & Store (Ware House)					
Project Status Modification					
Project Location Sheger,Gelan,Oromia,Ethiopia					
Owner Assefa Gemechu					
Coordinate X=483244.76 y=975393.22					
Consultant CHOSEN CONSULTING ARCHITECTS AND ENGINEERS Phone:-09-7071-2222 E-mail :- chosen1engineers@gmail.com					
<u>Designed By</u> Tewodros Alemu			<u>License/Signature</u> PPEE/3864		
<u>Checked By</u> Tewodros Alemu			PPEE/3864		
<u>CAD By</u>					
<u>Date</u> Jan, 2024			<u>Design Stage</u> Final		
Drawing Title- ELECTRICAL INSTALLATION DESIGN					
<u>Scale</u> 1:50		<u>Sheet No</u> EL-01/07			



Ground Floor@+0.00,+0.6

SDB-SW-GF											
DISTRIBUTION BOARD SCHEDULE											
PANEL NO. SDB-LIGHT-GF BUS TYPE: TPN + PE						MOUNTING :		FLUSH			
Service Voltage 380/220Volt, 3 Phase, 4 Wire+E. 50 Hz						Bus rating 63 A		Dr.No			
Circuit Number	DESCRIPTION	Wire Size(mm2)	Number of Poles	Circuit Rating	Breaker Type	Load Per Phase WATT (W)			BUS CONNECTION		
						1	2	3	1	2	3
1	factory Light	4x2.5	3	25	C	1000.00	1000.00	1000.00	.	.	.
2	factory Light	4x2.5	3	25	C	1000.00	1000.00	1000.00	.	.	.
3	factory Light	4x2.5	3	25	C	1000.00	1000.00	1000.00	.	.	.
4	factory Light	4x2.5	3	25	C	1000.00	1000.00	1000.00	.	.	.
5	factory Light	4x2.5	3	25	C	1000.00	1000.00	1000.00	.	.	.
6	factory Light	4x2.5	3	25	C	1000.00	1000.00	1000.00	.	.	.
7	factory Light	4x2.5	3	25	C	1000.00	1000.00	1000.00	.	.	.
8	factory Light	4x2.5	3	25	C	1000.00	1000.00	1000.00	.	.	.
9	factory SOCKET	3x2.5	3	25	C	1200.00			.	.	.
10	factory SOCKET	3x2.5	3	25	C		1200.00		.	.	.
11	factory SOCKET	3x2.5	3	25	C			1200.00	.	.	.
12	spare								.	.	.
SUB TOTAL						9200.00	9200.00	9200.00	.	.	.
MAIN SWITCH		63 Ampere,3 Phase, ACB				kW CONNECTED			27.60		
LOCATION		TOP				SPARE (10%)			30.36		
FEEDER		(5x16) sqmm									
POWER SOURCE		CMDB				DIVERSITY			0.90		
						MAX DEMAND POWER			27.32		
						LINE AMPERE			51.95		

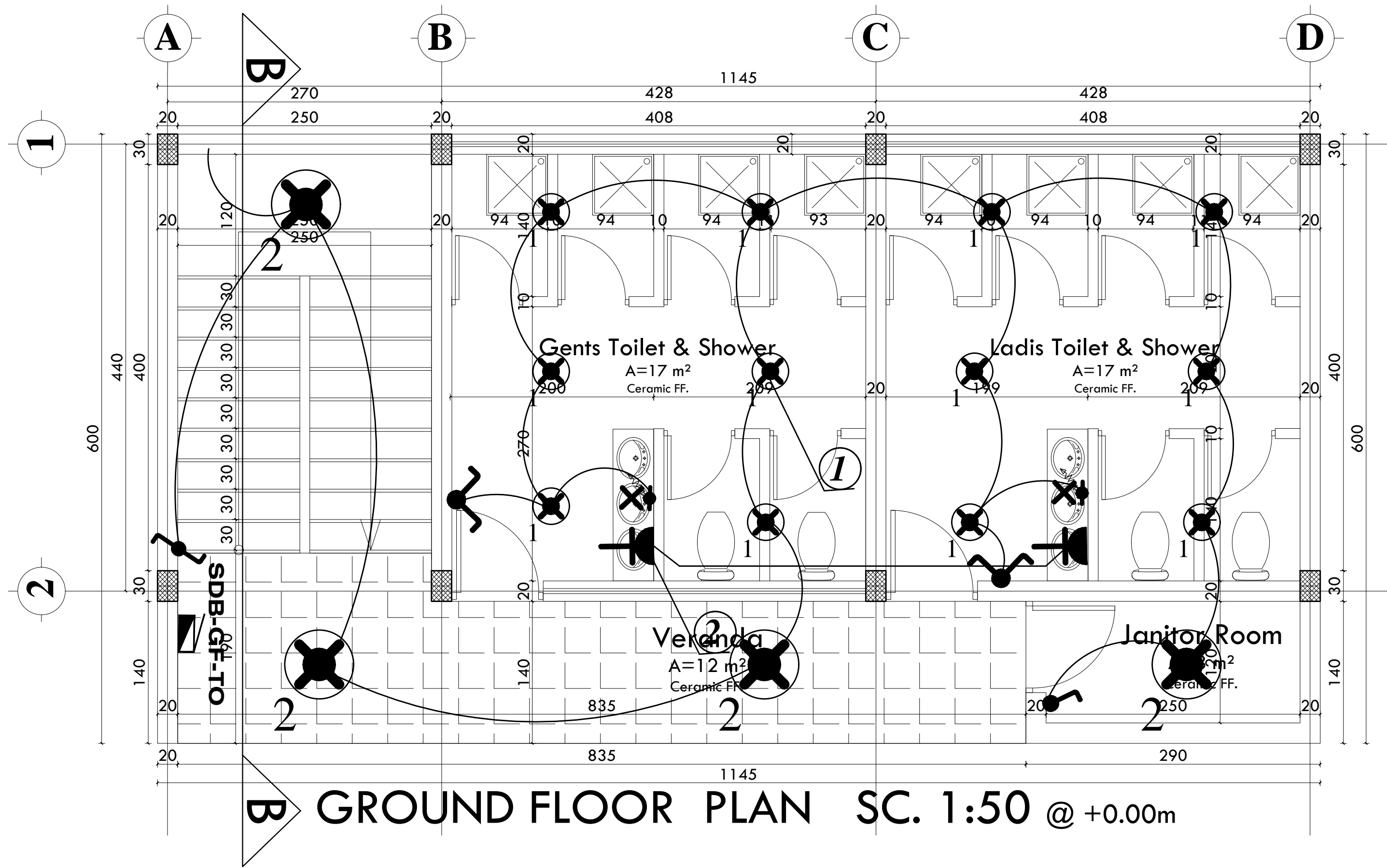
Rev.	Date	Description	Rev.by	Sign	
<u>Project Name</u> Small Scale Flour Milling Plant & Store (Ware House)					
<u>Project Status</u> Modification					
<u>Project Location</u> Sheger, Gelan, Oromia, Ethiopia					
<u>Owner</u> Assefa Gemechu					
<u>Coordinate</u> X=483244.76 y=975393.22					
<u>Consultant</u> CHOSEN CONSULTING ARCHITECTS AND ENGINEERS Phone:-09-7071-2222 E-mail :- chosen1engineers@gmail.com					
<u>Designed By</u> Tewodros Alemu		<u>License/Signature</u> PPEE/3864			
<u>Checked By</u> Tewodros Alemu		<u>PPEE/3864</u>			
<u>CAD By</u>					
<u>Date</u> Jan, 2024		<u>Design Stage</u> Final			
<u>Drawing Title-</u> ELECTRICAL INSTALLATION DESIGN					
<u>Scale</u> 1:50		<u>Sheet No</u> EL-02/07			



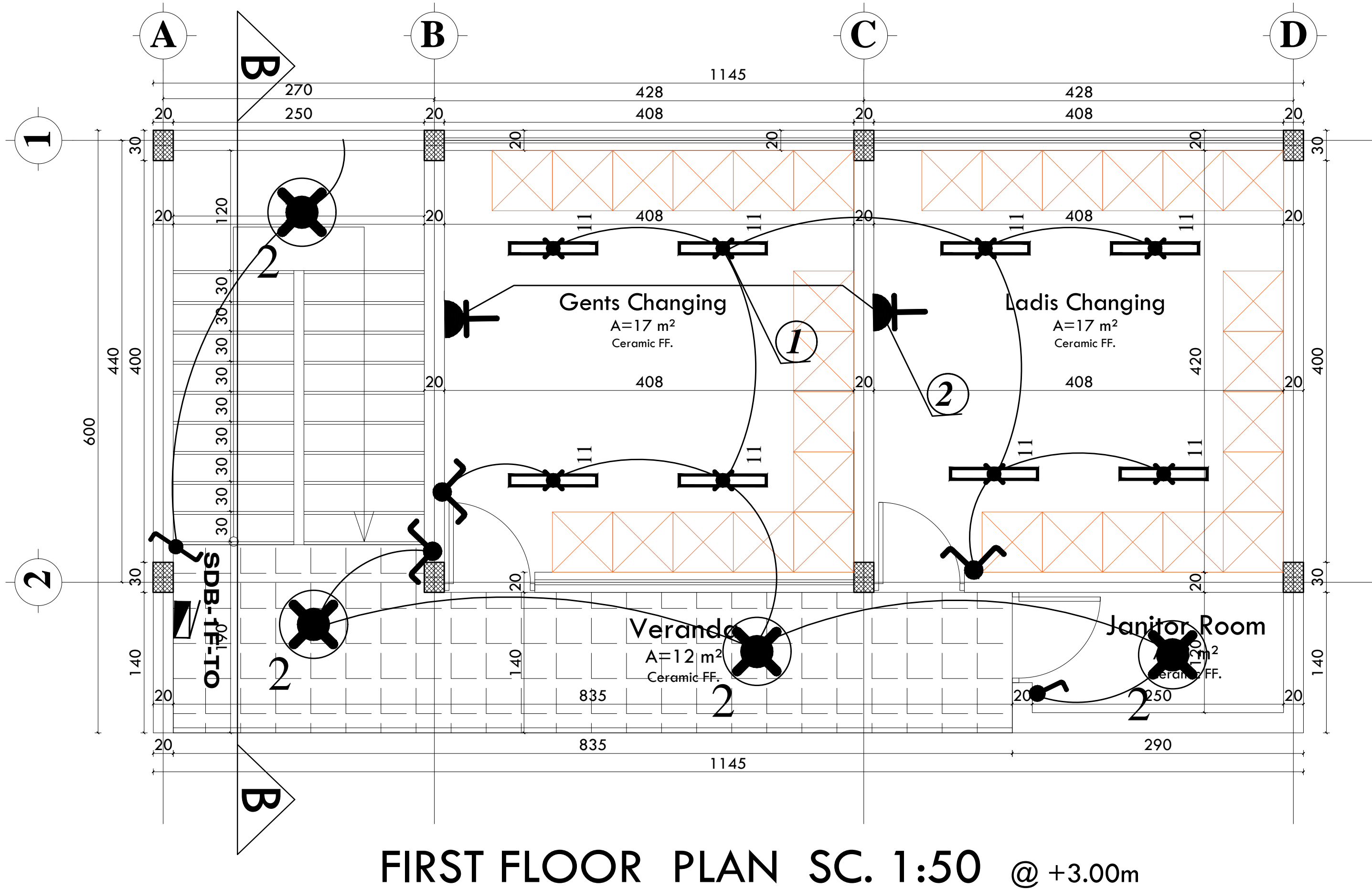
1st Floor@+3.00

SDB-1F											
DISTRIBUTION BOARD SCHEDULE											
PANEL NO. SDB-1F BUS TYPE : TPN + PE						MOUNTING : FLUSH					
Service Voltage 380/220Volt, 3 Phase, 4 Wire+E, 50 Hz						Bus rating 50 A		Dr.No			
Circuit Number	DESCRIPTION	Wire Size(mm2)	Number of Poles	Circuit Rating	Breaker Type	Load Per Phase WATT (W)			BUS CONNECTION		
						1	2	3	1	2	3
1	Light	2x2.5	1	10	C	336.00			.		
2	Light	2x2.5	1	10	C		336.00			.	
3	Light	2x2.5	1	10	C			336.00			.
4	Light	2x2.5	1	10	C	336.00			.		
5	Light	2x2.5	1	10	C		336.00			.	
6	Light	2x2.5	1	10	C			336.00			.
7	Light	2x2.5	1	10	C	336.00			.		
8	Light	2x2.5	1	10	C		336.00			.	
9	Light	2x2.5	1	10	C			336.00			.
10	Light	2x2.5	1	10	C	336.00			.		
11	Light	2x2.5	1	10	C		336.00			.	
12	Light	2x2.5	1	10	C			336.00			.
13	Light	2x2.5	1	10	C	336.00			.		
14	Socket	3x2.5	1	16	C		1200.00			.	
15	Socket	3x2.5	1	16	C			1200.00			.
16	Socket	3x2.5	1	16	C	1200.00			.		
17	Socket	3x2.5	1	16	C		1200.00			.	
18	Socket	3x2.5	1	16	C			1200.00			.
19	Socket	3x2.5	1	16	C	1200.00			.		
20	Socket	3x2.5	1	16	C		1200.00			.	
21	Socket	3x2.5	1	16	C			1200.00			.
22	Socket	3x2.5	1	16	C	1200.00			.		
23	Socket	3x2.5	1	16	C		1200.00			.	
24	Socket	3x2.5	1	16	C			1200.00			.
25	Socket	3x2.5	1	16	C	1200.00			.		
26	spare										
SUB TOTAL						6480.00	6144.00	6144.00	.	.	.
MAIN SWITCH		50 Ampere,3 Phase, ACB			KW CONNECTED			18.77			
LOCATION		TOP			SPARE (10%)			20.64			
FEEDER		(5x10) sqmm									
POWER SOURCE		CMDB			DIVERSITY			0.90			
					MAX DEMAND POWER			18.58			
					LINE AMPERE			35.32			

Rev.	Date	Description	Rev. by	Sign
<div><div>Project Name</div><div>Small Scale Flour Milling Plant & Store (Ware House)</div></div>				
<div><div>Project Status</div><div>Modification</div></div>				
<div><div>Project Location</div><div>Sheger, Gelan, Oromia, Ethiopia</div></div>				
<div><div>Owner</div><div>Assefa Gemechu</div></div>				
<div><div>Coordinate</div><div>X=483244.76 y=975393.22</div></div>				
<div><div>Consultant</div><div>CHOSEN CONSULTING ARCHITECTS AND ENGINEERS Phone:-09-7071-2222 E-mail :- chosen1engineers@gmail.com</div></div>				
<div><div>Designed By</div><div>Tewodros Alemu</div></div>			<div><div>License/Signature</div><div>PPEE/3864</div></div>	
<div><div>Checked By</div><div>Tewodros Alemu</div></div>			<div><div>PPEE/3864</div></div>	
<div><div>CAD By</div></div>				
<div><div>Date</div><div>Jan, 2024</div></div>			<div><div>Design Stage</div><div>Final</div></div>	
<div><div>Drawing Title-</div><div>ELECTRICAL INSTALLATION DESIGN</div></div>				
<div><div>Scale</div><div>1:50</div></div>		<div><div>Sheet No</div><div>EL-03/07</div></div>		

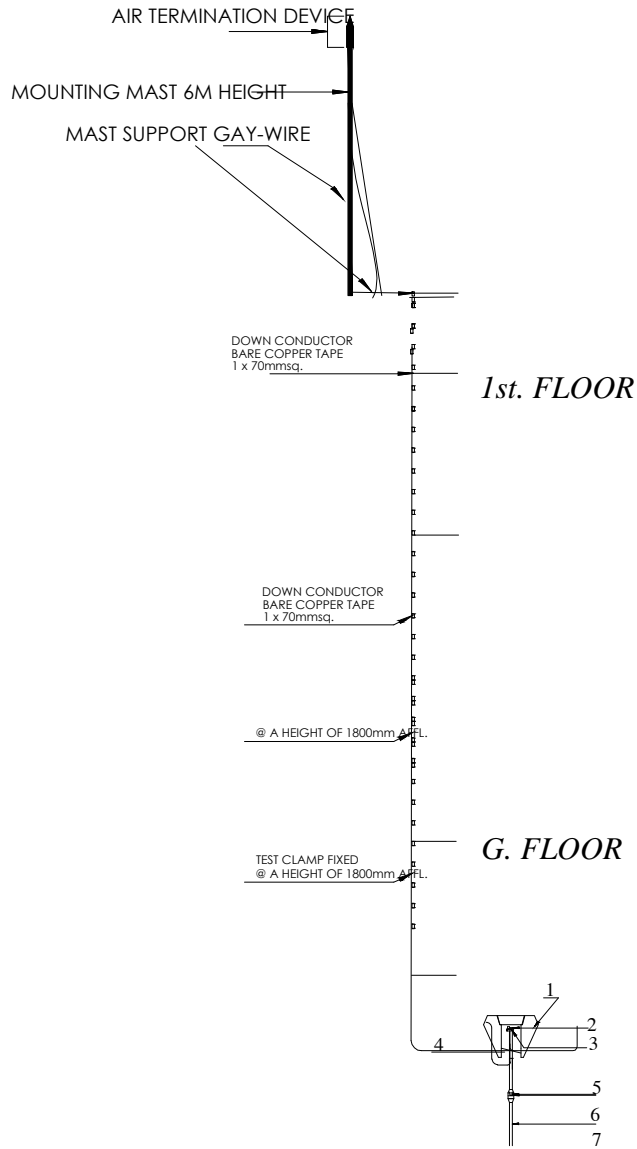
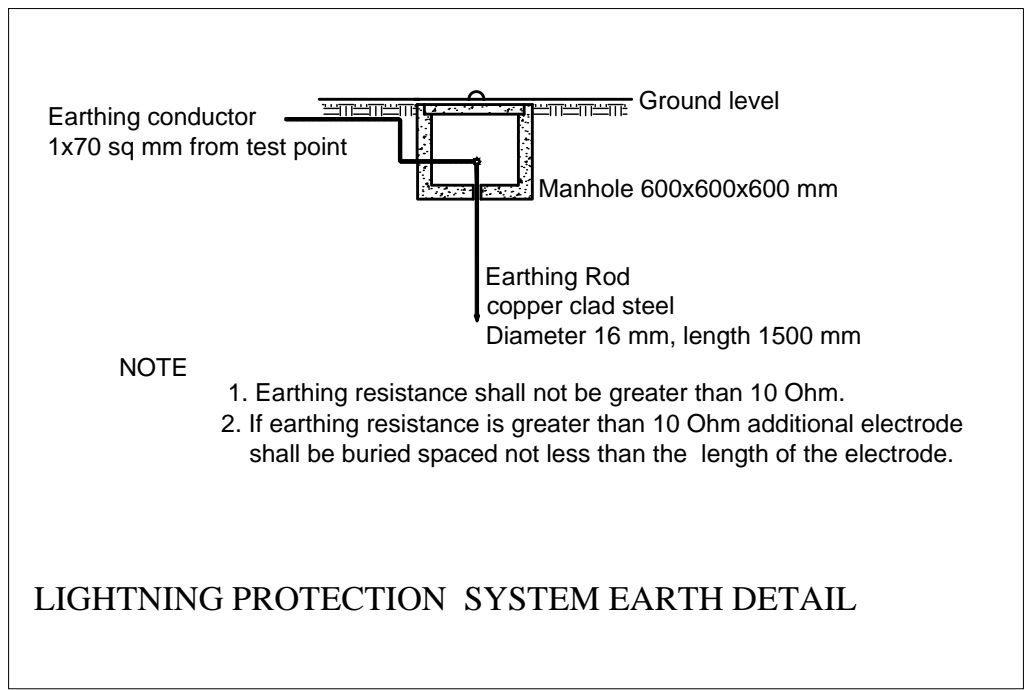
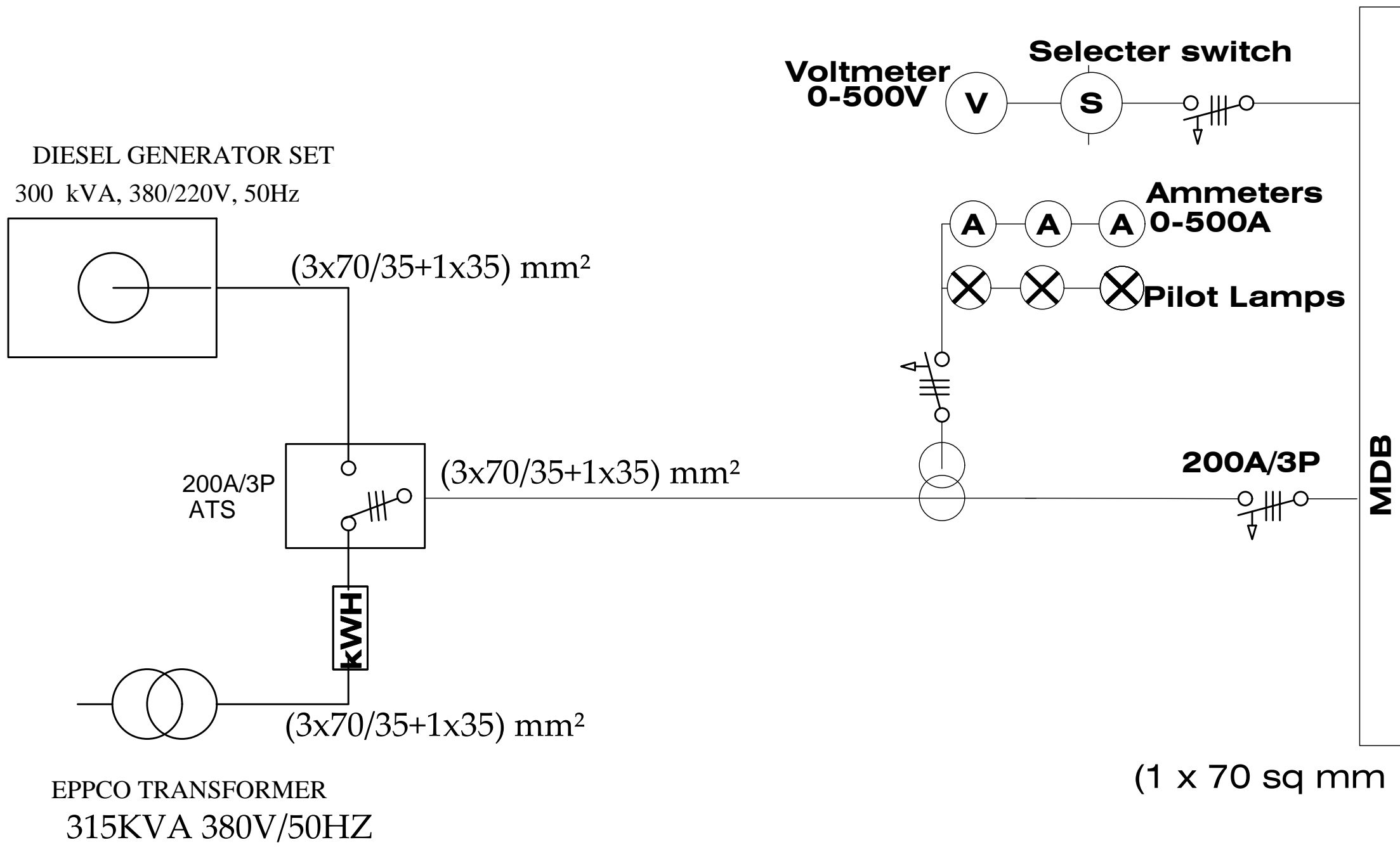


SDB-GF-TO											
DISTRIBUTION BOARD SCHEDULE											
PANEL NO. SDB-GF-TO BUS TYPE: TPN + PE MOUNTING: FLUSH											
Service Voltage 380/220Volt, 1 Phase, 2 Wire+E. 50 Hz Bus rating 25 A Dr.No											
Circuit	DESCRIPTION	Wire	Number	Circuit	Breaker	Load Per Phase			BUS CONNECTION		
Number		Size(mm2)	of Poles	Rating	Type	WATT (W)					
						1	2	3	1	2	3
1	Light	2x2.5	1	10	C	250.00			•		
2	Light	2x2.5	1	10	C	250.00			•		
3	SOCKET OUTLET	3x2.5	1	16	C	1200.00			•		
4	SOCKET OUTLET	3x2.5	1	16	C	1200.00			•		
5	spare										
SUB TOTAL						2900.00	0.00	0.00	•		
MAIN SWITCH		25 Ampere.1 Phase. ACB			KW CONNECTED				2.90		
LOCATION		TOP			SPARE (10%)				3.19		
FEEDER		(3x4) sqmm									
POWER SOURCE		CMDB			DIVERSITY				0.90		
					MAX DEMAND POWER				2.87		
					LINE AMPERE				16.31		



SDB-1F-TO											
DISTRIBUTION BOARD SCHEDULE											
PANEL NO. SDB-1F-TO BUS TYPE: TPN + PE MOUNTING : FLUSH											
Service Voltage 380/220Volt, 1 Phase, 2 Wire+E. 50 Hz Bus rating 25 A Dr.No											
Circuit	DESCRIPTION	Wire	Number	Circuit	Breaker	Load Per Phase			BUS CONNECTION		
Number		Size(mm2)	of Poles	Rating	Type	WAT T (W)					
						1	2	3	1	2	3
1	Light	2x2.5	1	10	C	250.00			•		
2	Light	2x2.5	1	10	C	250.00			•		
3	SOCKET OUTLET	3x2.5	1	16	C	1200.00			•		
4	SOCKET OUTLET	3x2.5	1	16	C	1200.00			•		
5	spare										
SUB TOTAL						2900.00	0.00	0.00	•		
MAIN SWITCH		25 Ampere.1 Phase. ACB			KW CONNECTED				2.90		
LOCATION		TOP			SPARE (10%)				3.19		
FEEDER		(3x4) sqmm									
POWER SOURCE		CMDB			DIVERSITY				0.90		
					MAX DEMAND POWER				2.87		
					LINE AMPERE				16.31		

POWER GENERATOR DETAIL



LIGHTNING PROTECTION SYSTEM

EL LEGEND	
	HEAT DETECTOR
	SMOCK DETECTOR
	MANUAL BREAK GLASS
	FIRE ALARM ANAUNCIATOR
	SOUNDER + VISUAL INDICATOR
	PROJECTED BEAM TRANSVERSE
	PROJECTED BEAM REFLECTOR
	360° AUTO DOME CCTV CAMERA
	CELING RECESSE D SOUNDER
	FIRE ALARM CONTROL PANEL
	CCTV LINE IN
	PVC dia. 3X16mm

ELECTRICAL LEGEND	
	—Socket outlet
	—3 phase Socket outlet
	—Ceiling mounted pendant luminaire
	— Fluorescent Lamp
	—Ceiling mounted luminaire
	—Wall mounted luminaire
	—Wall mounted luminaire with selfswitch
	—Single-Pole Switch
	— two way Switch
	— Double-Pole Switch
	—TV wall outlet
	—Tele/Data wall outlet

LIGHTING FITTING SCHEDULE					
FTT. No.	TYPE OF LIGHT FITTING	TYPE	WATTAGE	MOUNT	
1	Philips 32005/31/76 with 1xGENIE14WCDLES 14W Lamps	Compact Flourscnt	14 watt	Cieling	TOILET/SHAVING
2	MASSIVE 30204/86/10 with 1x60A1/CL/E27 60W Lamp	Incandescent	60 watt	Cieling	CEILING FOR LIVING , DINING,FAMILY&BED ROOM
3	MASSIVE 85020/18/31 with 1xGENIE14WCDLES 14W Lamps	Compact Flourscnt	14 watt	Wall	GYMNASIUM & PARKING
4	RZB 93131.772 with 1xCANDLE B35 1x60W Lamp/Decorative	Incandescent	60 watt	Wall	LIVING , DINING,FAMILY&BED ROOM WALL LIGHT
5	Philips 32005/31/76 with 1xGENIE14WCDLES 14W Lamps	Compact Flourscnt	14 watt	Cieling	TOILET, WALK IN CLOSET & MASTER BATH ROOM
8	RZB 93131.772 with 1xCANDLE B35 1x60W Lamp/Decorative	Incandescent	60 watt	Wall	LIVING , DINING,FAMILY&BED ROOM WALL LIGHT
9	RZB 33 1080.00X with 1x60A1/CL/E27 60W Lamp	Incandescent	60 watt	Cieling	CORRIDOR & STAIRCASE, SAUNA ,STEAM & OFFICE
10	MASSIVE 36255/06/10 with 5x60A1/CL/E27 60W Lamps	Incandescent	60 watt	Cieling	LIVING, FAMILY & DINING ROOM
11	Philips TCS 098 236 C3 with 2xTLD36W830ALTO 72W Lamps	Flourscent	72 watt	Cieling	KITCHEN, OFFICE, PARKING
12	Philips TCS 098 236 C3 with 1xTLD36W830ALTO 36W Lamps	Flourscent	36 watt	Cieling	PARKING & STORE
13	MASSIVE 30162/04/10 with 1xGENIE14WCDLES 14W Lamps	Compact Flourscnt	14 watt	Cieling	VERANDAH ,BALCONY & TERRACE

Legend (Mounting Height)

1- Unless otherwise stated all Socket,Telephone & TV outlets should be mounted at height of 40cm AFFL.

2 Wall Light Fittings at Living & Dinning should be mounted @ 40cm from Ceiling

3 Wall mounted Mirror Light should be mounted @ 210cm AFFL

4 Water heater should be mouted @ 180cm AFFL

5 Shaver Socket should be mouted @ 140cm AFFL

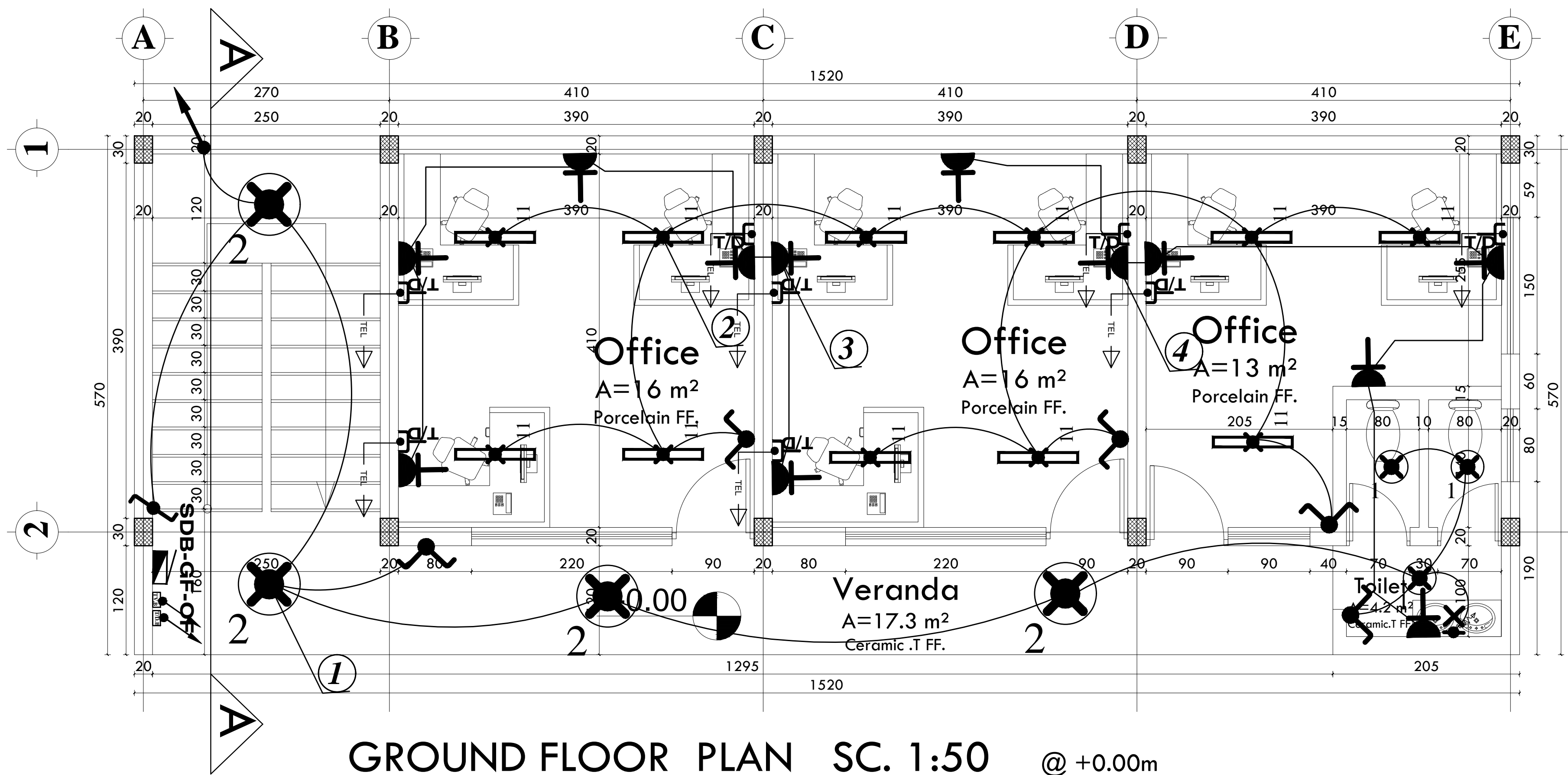
6 Socket outlet at Kicthen except Injera stove outlet all are to be mounted @ 100cm AFFL

7 Flush Mounted Distribution Boards to be mounted @180cm center AFFL

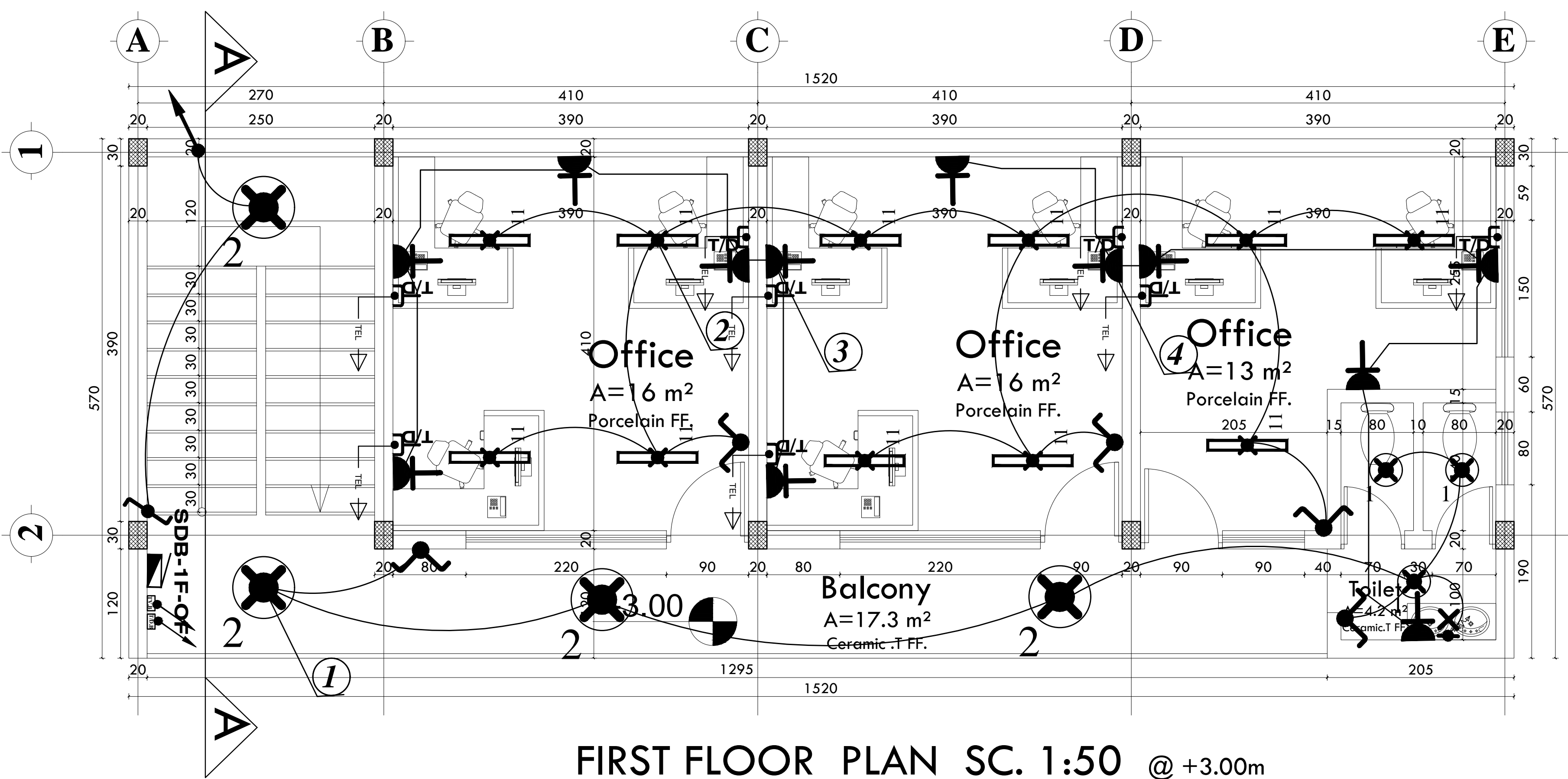
9 Switch outlets should be mounted @ 140cm AFFL except at bed side which is @ 120cm AFFL.

10 The distance from the opening door to switch should not be less than 15cm

Rev.	Date	Description	Rev.by	Sign
Project Name Small Scale Flour Milling Plant & Store (Toilet & Changing Room)				
Project Status Modification				
Project Location Sheger,Gelan,Oromia,Ethiopia				
Owner Assefa Gemechu				
Coordinate X=483244.76 y=975393.22				
Consultant CHOSEN CONSULTING ARCHITECTS AND ENGINEERS Phone:-09-7071-2222 E-mail :- chosen1engineers@gmail.com				
<u>Designed By</u> Tewodros Alemu		<u>License/Signature</u> PPEE/3864		
<u>Checked By</u> Tewodros Alemu		PPEE/3864		
<u>CAD By</u>				
<u>Date</u> Jan,2024		<u>Design Stage</u> Final		
Drawing Title- ELECTRICAL INSTALLATION DESIGN				
<u>Scale</u> 1:50		<u>Sheet No</u> EL-05/07		

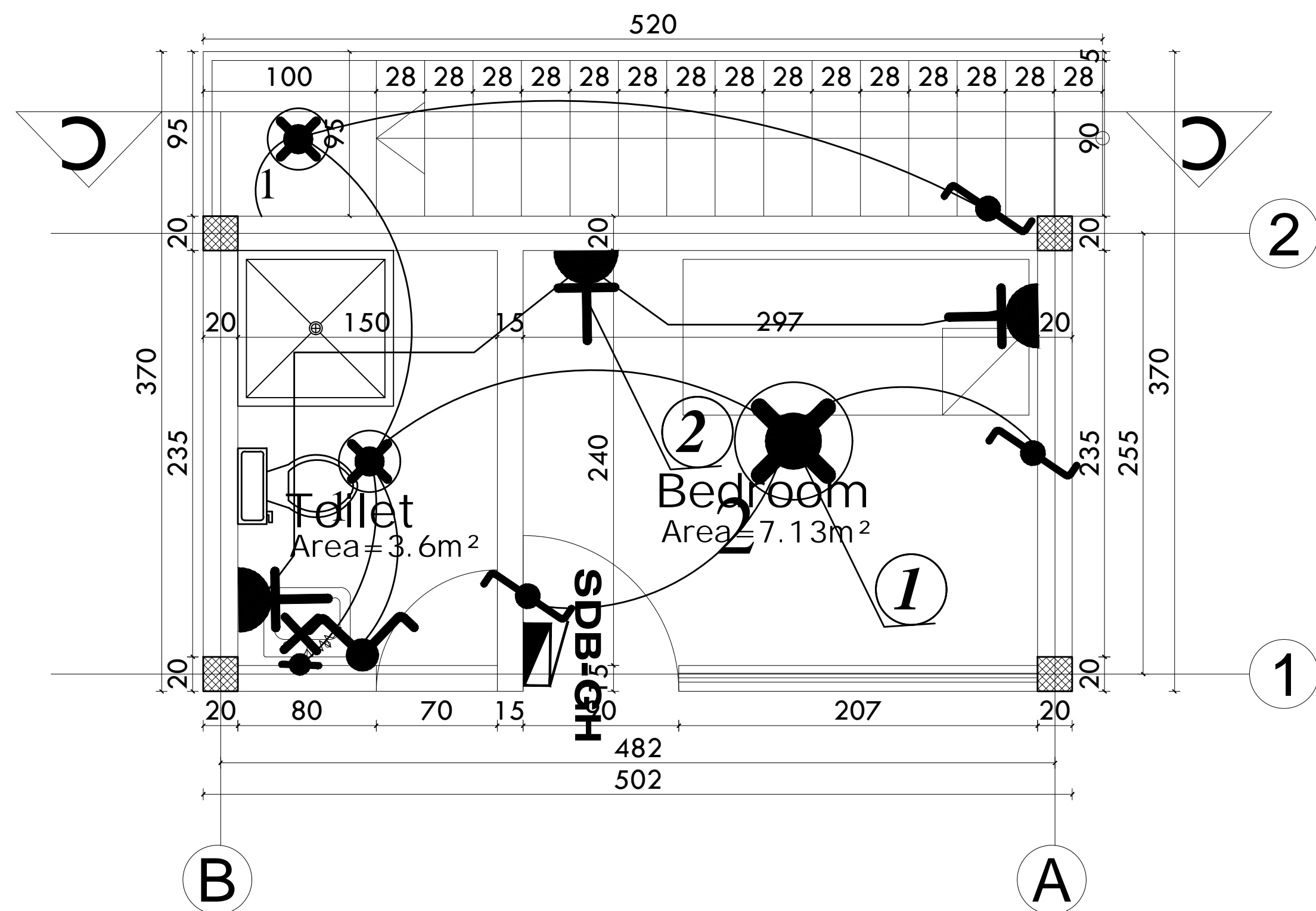


SDB-GF-OF									
DISTRIBUTION BOARD SCHEDULE									
PANEL NO. SDB-GF-OF BUS TYPE: TPN+PE				MOUNTING: FLUSH		Dr.No			
Service Voltage 380/220Volt, 1 Phase, 2 Wire+E. 50 Hz				Bus rating 25 A					
Circuit Number	DESCRIPTION	Wire Size(mm2)	Number of Poles	Circuit Rating	Breaker Type	Load Per Phase WATT (W)			BUS CONNECTION
						1	2	3	1 2 3
1	Light	2x2.5	1	10	C	250.00			•
2	Light	2x2.5	1	10	C	250.00			•
3	SOCKET OUTLET	3x2.5	1	16	C	1200.00			•
4	SOCKET OUTLET	3x2.5	1	16	C	1200.00			•
5	spare								
SUB TOTAL						2900.00	0.00		•
MAIN SWITCH		25 Ampere.1 Phase. ACB		KW CONNECTED		2.90			
LOCATION		TOP		SPARE (10%)		3.19			
FEEDER		(3x4) sqmm							
POWER SOURCE		CMDB		DIVERSITY		0.90			
				MAX DEMAND POWER		2.87			
				LINE AMPERE		16.31			

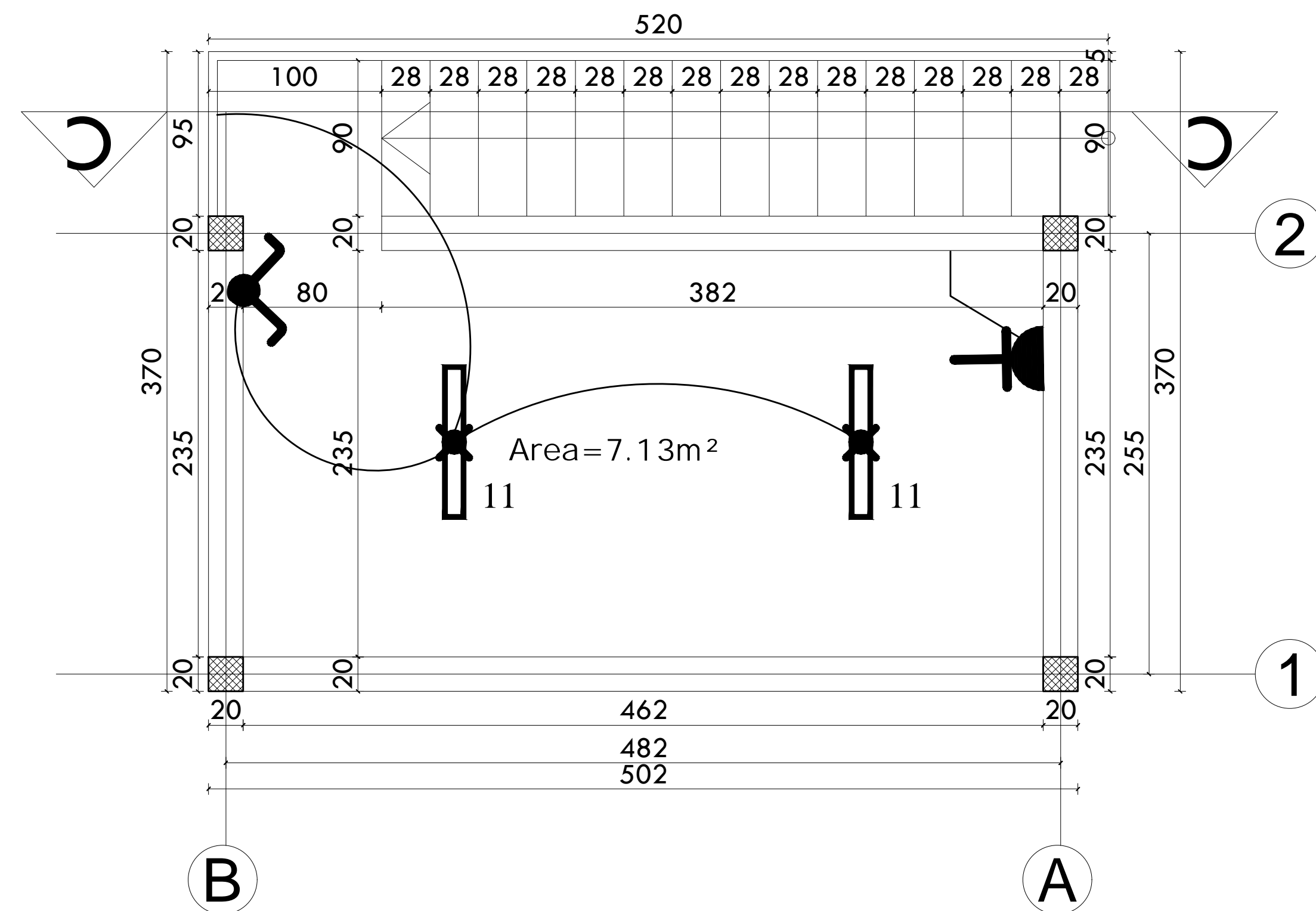


SDB-1F-OF									
DISTRIBUTION BOARD SCHEDULE									
PANEL NO. SDB-1F-OF BUS TYPE: TPN+PE				MOUNTING: FLUSH		Dr.No			
Service Voltage 380/220Volt, 1 Phase, 2 Wire+E. 50 Hz				Bus rating 25 A					
Circuit Number	DESCRIPTION	Wire Size(mm2)	Number of Poles	Circuit Rating	Breaker Type	Load Per Phase WATT (W)			BUS CONNECTION
						1	2	3	1 2 3
1	Light	2x2.5	1	10	C	250.00			•
2	Light	2x2.5	1	10	C	250.00			•
3	SOCKET OUTLET	3x2.5	1	16	C	1200.00			•
4	SOCKET OUTLET	3x2.5	1	16	C	1200.00			•
5	spare								
SUB TOTAL						2900.00			•
MAIN SWITCH		25 Ampere.1 Phase. ACB		KW CONNECTED		2.90			
LOCATION		TOP		SPARE (10%)		3.19			
FEEDER		(3x4) sqmm							
POWER SOURCE		CMDB		DIVERSITY		0.90			
				MAX DEMAND POWER		2.87			
				LINE AMPERE		16.31			

Rev.	Date	Description	Rev.by	Sign
Project Name				
Small Scale Flour Milling Plant & Store (Office)				
Project Status				
Modification				
Project Location				
Sheger,Gelan,Oromia,Ethiopia				
Owner				
Assefa Gemechu				
Coordinate				
X=483244.76 y=975393.22				
Consultant				
CHOSEN CONSULTING ARCHITECTS AND ENGINEERS				
Phone:-09-7071-2222				
E-mail :- chosen1engineers@gmail.com				
Designed By			License/Signature	
Tewodros Alemu			PPEE/3864	
Checked By			PPEE/3864	
Tewodros Alemu				
CAD By				
Date			Design Stage	
Jan,2024			Final	
Drawing Title-				
ELECTRICAL INSTALLATION DESIGN				
Scale		Sheet No		
1:50		EL-06/07		



GROUND FLOOR PLAN SC. 1:50 @ +0.00m



FIRST FLOOR PLAN SC. 1:50 @ +2.70m

SDB-GH											
DISTRIBUTION BOARD SCHEDULE											
PANEL NO. SDB-GH BUS TYPE: TPN + PE MOUNTING : FLUSH											
Service Voltage 380/220Volt, 1 Phase, 2 Wire+E. 50 Hz Bus rating 25 A Dr.No											
Circuit	DESCRIPTION	Wire	Number	Circuit	Breaker	Load Per Phase			BUS CONNECTION		
Number		Size(mm2)	of Poles	Rating	Type		WATT (W)				
						1	2	3	1	2	3
1	Light	2x2.5	1	10	C		250.00			•	
2	SOCKET OUTLET	3x2.5	1	16	C		1200.00			•	
3	spare										
		SUB TOTAL					1450.00			•	
	MAIN SWITCH	25 Ampere.1 Phase. ACB			kW CONNECTED			1.45			
	LOCATION	TOP			SPARE (10%)			1.60			
	FEEDER	(3x4) sqmm									
	POWER SOURCE	CMDDB			DIVERSITY			0.90			
					MAX DEMAND POWER			1.44			
					LINE AMPERE			8.16			

CMDDB											
DISTRIBUTION BOARD SCHEDULE											
PANEL NO. CMDDB BUS TYPE : TPN + PE MOUNTING : FLUSH											
Service Voltage 380/220Volt, 3 Phase, 4 Wire+E. 50 Hz Bus rating 250 A Dr.No											
Circuit	DESCRIPTION	Wire	Number	Circuit	Breaker	Load Per Phase			BUS CONNECTION		
Number		Size(mm2)	of Poles	Rating	Type	WATT (W)					
						1	2	3	1	2	3
1	power to SDB-SW	5x16	3	63	C	9200.00	9200.00	9200.00	•	•	•
2	power to SDB-1F	5x10	3	50	C	6480.00	6144.00	6144.00	•	•	•
3	power to SDB-GH	3x4	1	25	C	1450.00			•		
4	power to SDB-GF-TO	3x4	1	25	C	2900.00			•		
5	power to SDB-1F-TO	3x4	1	25	C		2900.00			•	
6	power to SDB-GF-OF	3x4	1	25	C		2900.00			•	
7	power to SDB-1F-OF	3x4	3	32	C			2900.00			•
8	POWER to water pump	5x4	3	32	C	1030.00	1030.00	1030.00	•	•	•
9	POWERto FAwater pump	5x4	3	32	C	1200.00	1200.00	1200.00	•	•	•
10	spare										
11	spare										
SUB TOTAL						22260.00	23374.00	20474.00	•	•	•
MAIN SWITCH		200 Ampere. 3 Phase. ACB				kW CONNECTED			66.11		
LOCATION		TOP				SPARE (10%)			72.72		
FEEDER		(3x70+35) sqmm									
POWER SOURCE		EEPCO				DIVERSITY			0.90		
						MAX DEMAND POWER			65.45		
						LINE AMPERE			124.42		

Rev.	Date	Description	Rev.by	Sign
Project Name Small Scale Flour Milling Plant & Store (Guard House)				
Project Status Modification				
Project Location Sheger, Gelan, Oromia, Ethiopia				
Owner Assefa Gemechu				
Coordinate X=483244.76 y=975393.22				
Consultant CHOSEN CONSULTING ARCHITECTS AND ENGINEERS Phone:-09-7071-2222 E-mail :- chosen1engineers@gmail.com				
Designed By Tewodros Alemu		License/Signature PPEE/3864		
Checked By Tewodros Alemu		PPEE/3864		
CAD By				
Date Jan, 2024		Design Stage Final		
Drawing Title- ELECTRICAL INSTALLATION DESIGN				
Scale 1:50		Sheet No EL-07/07		