

A LIST OF APPROVED MAKES - ELECTRICAL & LV SYSTEM		
Consultant will choose the make and material to be used, similar specifications material other than those mentioned can be used can be used after consultant's approval.		
LIST OF APPROVED MAKES FOR EQUIPMENT & MATERIALS		
A. MEDIUM VOLTAGE EQUIPMENT		
S.No.	A. Details of Materials / Equipment	
	Manufacturer's Name	
1	Final Distribution Board	L&T ,Schneider Electric (MG) ABB ,Siemens
2	Power Distribution Panel and Motor Control Centre	Risha Control Engineers ,Anubhav Electricals ,Vidyut Control India Pvt Ltd
3	Moulded Case Circuit Breaker (MCCB) With extended rotary handle	Larsen & Toubro (Dsine) Schneider Electric (Compact NSX) ABB (T – Max)
4	Motor Protection Circuit Breaker(MPCB)	L&T ,Schneider Electric ABB
5	Miniature Circuit Breakers (MCB)	Schneider Electric (MG) (L&T) ,ABB ,Siemens
6	Residual Current Circuit Breaker (RCCB)	L&T ,Schneider Electric (MG) ABB
7	Power/Aux. Contactor / Capacitor Duty Contactor	L&T ,Schneider Electric (MG) ABB
8	Change Over Switch	Elcon ,HPL – Socomec Larsen & Toubro
9	Control Transformer/Potential Transformers	Automatic Electric ,Gilbert & Maxwell Matrix ,Pragati Precise
10	Current Transformer (Epoxy Cast Resin)	Automatic Electric ,Gilbert & Maxwell Matrix ,Pragati Precise
11	Protection Relay	
12	Electromagnetic / Microprocessor Type	ABB Areva ,Larsen & Toubro
13	Indicating Lamps LED type and Push Button	Larsen & Toubro (ESBEE) ,Schneider Electric Siemens Surbhi ,Vaishno Electricals
14	Overload relays with built in Single Phase preventer	ABB ,Larsen & Toubro ,Schneider Electrical ,Siemens
15	Electronic Digital Meters (AV/PF/Hz/KW/KWH) with LED Display	Automatic Electric,Conzerve (Schneider Electric) ,Secure,EI Measure L&T Trinity
16	Static Power Meter & Logger (SPML)With RS 485 port	Conzerve ,EI Measure ,L&T ,Schneider Electric
17	Power Capacitor	Meher GE ,Siemens (Epcos) Trinity
18	Automatic Power Factor Correction Relay (Numeric Type)	Siemens (Epcos) ,BELUK (Germany) ,Conzerve ,Ducati Trinity
19	Detuned Reactor	ABB ,EPCOS ,Meher Trinity
20	PVC insulated XLPE aluminium/copper conductor armored MV Cables up to 1100 V grade	KEI ,Polycab, Havells , Nicco
21	LT Jointing Kit / Termination	Birla-3M ,Raychem ,REPL ,Safe Kit
22	Cable Glands Double Compression with earthing links	Baliga Lighting, Comet ,Cosmos
23	PVC Glands	Comet ,Cosmos, Dowell, HMI
24	Motor	Control Well ,Lapp
25	Bimetallic Cable Lug	Comet ,Cosmos ,Dowell's (Billar India) ,Hax Brass (Copper Alloy India)
26	PVC insulated copper conductor stranded flexible wires (FRLS) -	KEI,Polycab, Havells , Fenolix
27	Mettalic / GI Conduit (ISI approved)	AKG ,BE, NIC
28	Lead Coated Flexible GI Conduit	PLICA India Pvt. Ltd. , Flexicon
29	PVC Conduit & Accessories (ISI approved)	AKG ,BEC, Polypack ,Precision
30	Switch & Socket	ABB , Legrand north-west schiniter
31	Terminal Blocks	Connect Well Elmex ,Wago
32	Industrial Socket	Clipsal ,Legrand ,Neptune Balls, Schneider Electric
	a. Splash Proof	
	b. Metal Clad	BCH ,Legrand
33	Ceiling Fan	Anchor ,Crompton, Greaves ,Havells ,PSP0 ,Usha
34	Lighting Fixture	Philips ,Wipro,Havells,Electricals Ltd
	a. LED	
	b. External Lighting Fixture	Philips ,Wipro ,HavellsElectricals Ltd.
35	Sealed Maintenance Free Batteries	Amar Raja, Exide ,U -PLUS, Leoch
36	Battery Charger	Caldyne ,Chhabi Electricals, Joshi Electricals, Volstat
37	UPS	Riello-UPS, Eaton, Schneider , auto meter
38	Cable Trays (Factory Fabricated) / Raceways	Profab Engineer, Maheshwari Electricals ,Rico Steel ,Needo
39		
B. CABLING SYSTEM (VOICE / DATA)		
1	Cat-6 Cable	Amp ,AVAYA ,Beldon ,Krone Communication Siemen
2	Patch Cords, patch panels, cross connect outlet	Amp ,AVAYA,Beldon ,Krone Communication, Siemens
3	Main Distribution Frame	,Krone
4	Metalic Conduit (ISI approved)	AKG ,BEC, NIC
5	Telephone Armored Cables	
C. FAS SYSTEM		
1	Smoke Detectors	Notifier Edwards ,Honeywell (XLS) ,Siemen
2	Heat Detectors	Notifier Edwards ,Honeywell (XLS) ,Siemens
3	Control Modules/ Monitor Modules/ Fault Isolators	Notifier Edwards ,Honeywell (XLS) ,Siemens
4	Main Control Panel	,Notifier Edwards ,Honeywell (XLS) ,Siemens
5	Manual Call Stations/ Hooters/ Speakers	Notifier ,Edwards Honeywell (XLS) ,Siemens
6	Sealed Maintenance free Batteries	Exide ,GS Batteries (Japan Storage Co. Ltd.) ,Hitachi
7	Power/ Co-axial Cables	,Finolex ,Fusion Polymers ,Lapp Kabel, Polycab ,RR Kabel
8	MS Conduits	,AKG ,BEC, NIC
9	Accessories for Metallic Conduit (ISI approved)	Sharma Sales Corporation ,Super Sales Corporation, Prakash Sales
10	Computer	Dell ,Hewlet ,Packard, IBM
11	Colour Monitor (work stations)	LG, Philips, Samsung
12	Printer	Epson ,NEC TVSE ,Hewlet Packard
13	Mouse	Dell ,Logitech
14	Cable Trays/ Raceways (Prefabricated)	Profab Engineer ,Rico Steel Indiana
15	Cat-6 Cable, Wires	Amp ,Krone, Communication, Molex
16	Laser Detector/ Nozzle/ Panel/ Software	Vesda ,ICAM
17	Aspiration Tubes	Finolex, Precision
18	Electronic Hooter	System Sensor
19	FR CPVC Pipe	AKG ,NEC
20	Fire Survival cable	Bonton, AFW ,Fitek ,Havells

A LIST OF APPROVED MAKES -HVAC System		
Consultant will choose the make and material to be used, similar specifications material other than those mentioned can be used can be		
LIST OF APPROVED MAKES-HVAC		
S.No.	Details of Materials / Equipment	Manufacturer's Name
1	VRF Unit	Daikin ,Toshiba Mitsubishi Electric ,
2	Air Washer	Systemair ,Trio Air System VTS ,Citizen ZECO
3	Ducting	Commander (heavy duty)
4	Anchor/ Fastener	Hilti ,Fisher , MUPRO
5	Propeller Fans	Kruger ,Caryaire ,Systemair Crompton/Nicotra Air Flow
6	CRC	Daikin ,Toshiba ,Mitsubishi Electric
7	7.Closed Cell Nitrile rubber insulation/ EPDM insulation	Armacell ,K- Flex , A-Flex ,ALP aeroflex ,supreme
8	Cables	Polycab , KEI , Havells nicco
9	Grills/ Diffusers/ Fire Dampers/ Louvers/ Volume Control Dampers/ Back Draft Dampers	Systemair Caryaire Cosmos Trox , Trio Air System
10	PVC Pipes	Finolex ,Prince Supreme Ashirwad ,Astral
11	Refrigerant Piping	Mandev, Mexflow ,Rajco

A	LIST OF APPROVED MAKES - Plumbing System	
	Consultant will choose the make and material to be used, similar specifications material other than those mentioned can be used can be used after consultant's approval.	
	LIST OF APPROVED MAKES-PLUMBING AND FIRE FIGHTING	
1	Sunken Portion Treatment	SJP,MBT
2	Sanitary ware	Hindware, Jaquar
3	Seat Covers	Commander (heavy duty)
4	C.P. Fittings & Bathroom Accessories	Hindware, Jaquar
5	Stainless Steel Sink	Neelkanth,Nirali,AMC, Jayna
6	G.I. Pipes	Tata, Jindal (Hissar)
7	G.I. Fittings	Unik, R brand, Zolot 'M' , Kent Hexagonal
8	Ball Valve	Zoloto/ARCO/CIM
9	Butterfly Valves	Audco/Advance/C&R
10	Non return valve : a) G.M. , b) C.I.	Leader/Zoloto,Advance,IVC
11	CI Pipes/Fittings (I.S:3989-1984)	Neco/CIAL
12	C.I Manhole Cover (IS:1726-1991)	Neco/RIF/BC
13	C.I. Grating	Neco/RIF/B.C
14	CI Pipes 'Class LA'	Kesoram/Electro Steel
15	Stoneware pipes/traps	Perfect/Burn/Anand
16	UPVC pipe fittings	Kitec Supreme/Finolex
17	Insulation	Lloyd's India Ltd./Vidoflex/K-Flex/Owensand Corning
18	SFRC Manhole Cover/Grating	K.K Manhole /S.K. Precast Concrete
19	Water Flow meter	Kay Cee/Kent
20	R.C.C Pipe	Jain Spun Pipe/Pragati
21	Automatic Flushing Cistem	Angash International/AOS
22	Water Supply Pumps	Grundfos/Calpeda/KSB
23	Sump Pumps	Grundfos/Calpeda/KSB
24	Motor	Siemens/Crompton/NGEF/Kirloskar
25	Filter	Thermax/Ion-Exchange/Purge
26	Dosing Pump	Asia LMI
27	Dosing Tank	Sintex/Roto Plast
28	Pressure Gauges	Fiebig/H-Guru
29	Level Controller	Minilec/Femac/Textronics
30	Strainers	Emerald/Zoloto/DS Engineers
31	Air Vent Valve	Oven trop (Germany)/RB/Sant
32	Flanges	Able 'H'/Class 150/Rohini
33	Ball Cock	GPA,Sant,L&K
34	Gun Metal Ball/Gate Valves	Leader,Sant,Advance,Zoloto
35	Fire Extinguishers ISI Marked	CeaseFire/MINIMAX, Safeguard
36	Fire Fighting First Aid Hose reel	Padmini,Kesara Plast
37	R.R.L. Hose	Newage,Padmini,Kesar Plast
38	Hose Coupling Branch Pipe & Nozzle	Minimax,New age,Padmini
39	Landing Valves IS:5290/FB Connection Draw Act	Minimax,Newage,Safeguard
40	Water Supply Hydropneumatic System	DP Holland,Grundfos,Salmson
41	Fire Pump	Grundfos/Kirloskar/M&P
42	M.S. Pipes	Tata, Jindal (Hissar)
43	pressure Swith	Indfoss/Danfoss
44	Flaw Switch	System Sensor/Rapid Control
45	Pypecoat	IWL/Pypkote
46	Anunciation Panel	Daksh/ Agni/ ASE
47	I.C.V.	HD/Tyko/Viking
48	Sprinklers	HD/Tyko/Viking
49	Butterfly / Check Valve	IVC / Zoloto / Advance
50	PPSU (Polyphethylsulfone) Pipe	Poloplast
51	CPVC Pipes	Astral,Kisan
52	Concealed Cisterns	Gebberit/Kohler/Jaquar

List of Ceiling Make

- INDIA GYPSUM POINT
- SAINI PLYWOOD HOUSE
- USG BORAL

Base rate of windows and partitions

Windows Rate

Fixing charge	Channel Fixing	Toughened glass
30 Sq.ft	400 - 600 of 12 ft.	200 + GST

Frameless partition glazing 12mm rate - 200 + gst.

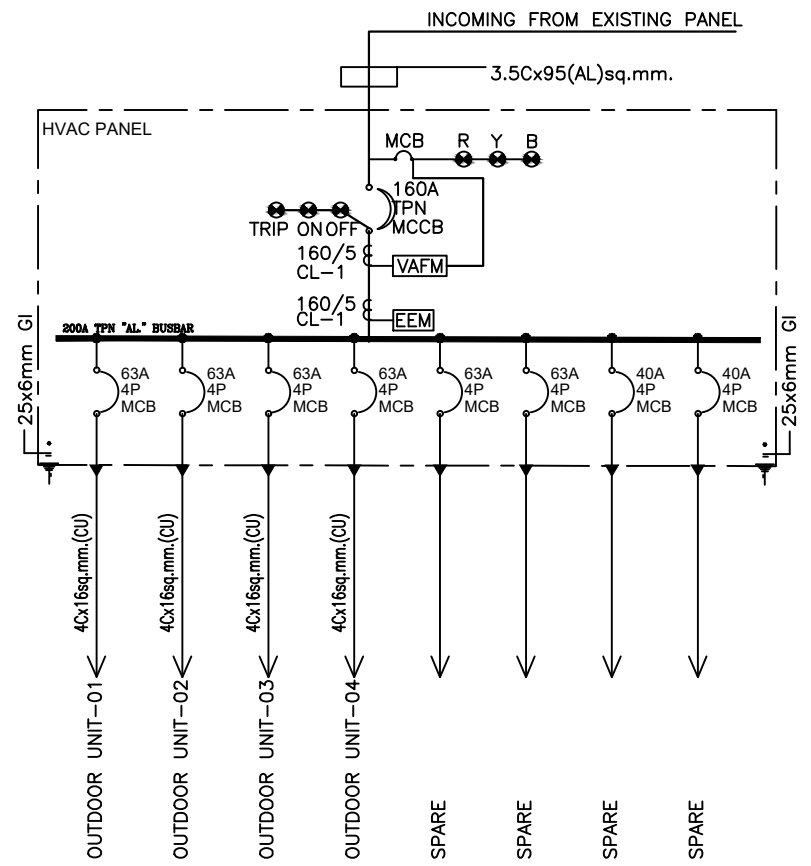
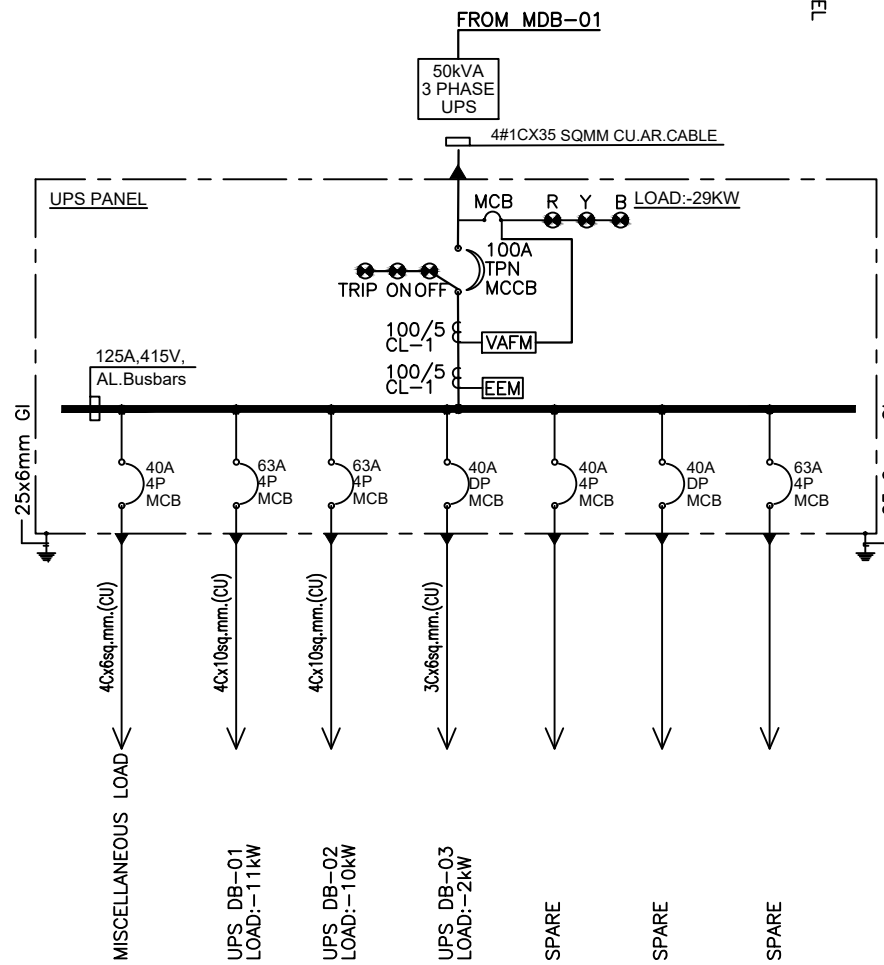
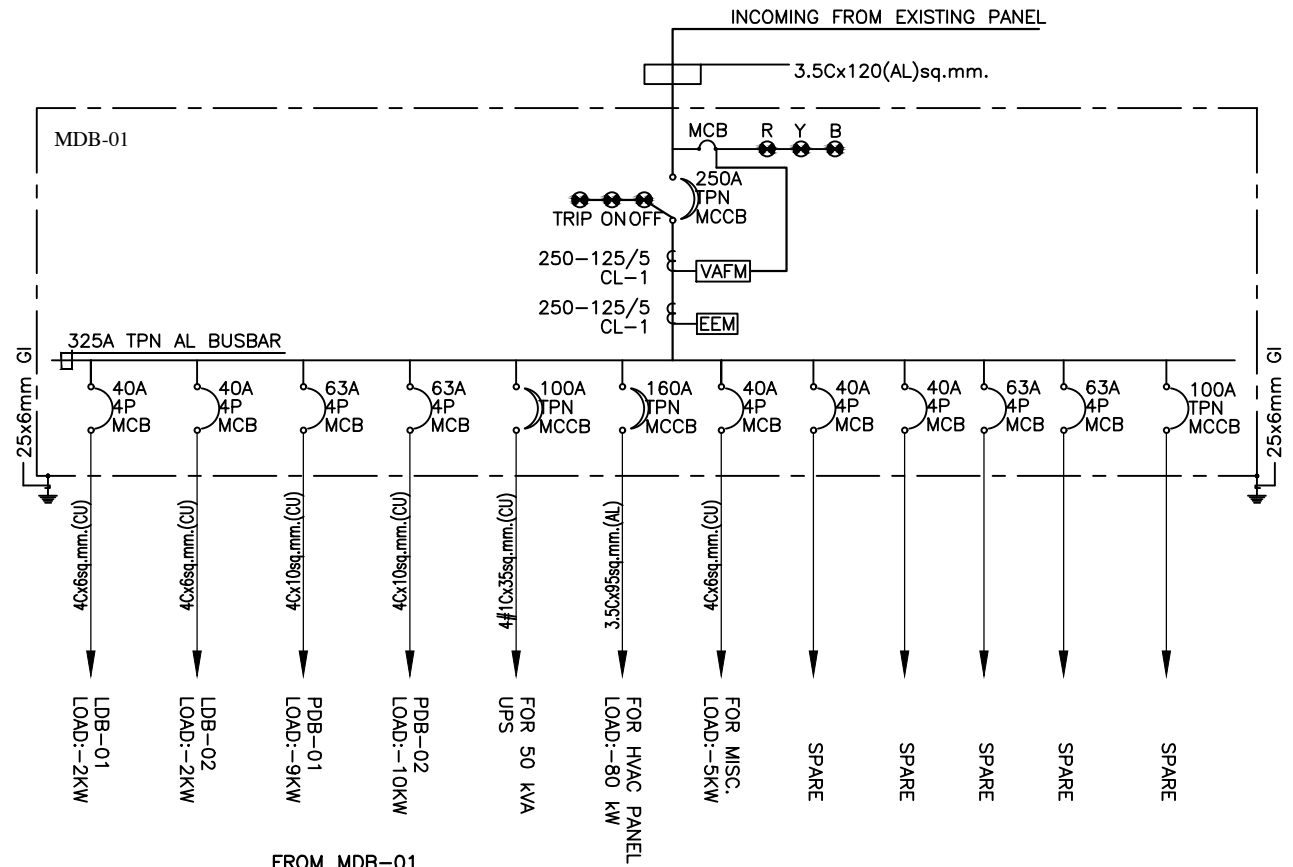
Fixing rate - 40-50 sq. Ft.

Base rate of hardware of doors and windows fitting

- Company doorset - 2000 incl. Handle ,lock,hinges, latches
- Door stopper - 150
- Tower bolt - 300
- Ozone - 2200 incl. Handle lock , handle
- SS hinges - 100 (4 inch)
- Doorset hinges - 100 (4 inch)
- Patch fitting ozone - 9000 incl. Floor Springe ,Pivot, Patch filling , Dead lock , H/C handle 450mm .

LEGEND:-

SNO.	SYM.	DESCRIPTION
01.	A	AMMETER
02.	V	VOLT METER
03.	PF	POWER FACTOR METER
04.	HZ	FREQUENCY METER
05.	KWH	KILOWATT HOUR METER
06.	KW	KILOWATT METER
07.	DEM	DUAL ELECTRONIC ENERGY METER
08.	ASS	AMMETER SELECTOR SWITCH
09.	VSS	VOLTMETER SELECTOR SWITCH
10.	¢	CURRENT TRANSFORMER
11.	•	INDICATING LAMP
12.	⏚	GROUNDING
13.	MPR	MICRO PROCESSOR BASED RELEASE
14.	EEM	ELECTRONIC ENERGY METER
15.	MCB	MOULDED CASE CIRCUIT BREAKER (MCCB)
16.	MINI	MINIATURE CIRCUIT BREAKER (MCB)
17.	ELCB	EARTH LEAKAGE CIRCUIT BREAKER
18.	RCCB	RESIDUAL CURRENT CIRCUIT BREAKER (RCCB)
19.	MPCB	MOTOR PROTECTION CIRCUIT BREAKER (MPCB)
20.	A/M	AUTO/ MANUAL SWITCH



NOTES:
THIS DOCUMENT IS AN INTELLECTUAL PROPERTY OF BUILTEN. THIS DRAWING CANNOT BE COPIED, REPRODUCED, RETAINED OR DISCLOSED TO ANY UNAUTHORISED PERSON.
ALL DIMENSIONS AND FINAL FINISHES TO BE SUBJECT TO CHECKING AND APPROVAL.
DO NOT SCALE OFF DRAWING. FIGURED DIMENSIONS TO BE TAKEN IN PREFERENCE TO THOSE SCALED. DIMENSIONS TO BE VERIFIED ON SITE.

DRAWING NOTES:-
1. CONTRACTOR MUST VERIFY & CHECK ALL DIMENSIONS, DRAWINGS, DETAILS AND SPECIFICATIONS ON SITE AND REPORT ANY ERROR AND DISCREPANCIES TO BUILTEN BEFORE PROCEEDING TO WORK.
2. ALL DIMENSIONS / LEVELS MENTIONED IN THE DRAWING ARE BASED ON THE SURVEY DRAWINGS. CONTRACTOR TO VERIFY ALL DIMENSIONS ON SITE PRIOR TO CONSTRUCTION.
3. ALL DIAGRAMMATIC REPRESENTATIONS OF FIXTURES IN DRAWINGS BY BUILTEN ARE FOR REPRESENTATION PURPOSE ONLY AND ARE NOT SPECIFIC TO INDIVIDUAL FIXTURES.
4. CONTRACTOR TO CONFIRM ALL FINISHES & MATERIALS WITH BUILTEN PRIOR TO APPLICATION.

REV. NO.	DESCRIPTION	DATE

KEY PLAN

DESIGN CONSULTANTS | ARCHITECTS
builten
ARCHITECTURE INTERIOR | BIM

Services Consultant
G K Services Consultants & Associates
ARCHITECTURE INTERIOR | BIM

PROJECT MANAGEMENT CONSULTANT
cept

CLIENT/PROJECT NAME
COMPUTER LAB
JAMIA HAMDARD

SHEET NAME
ELECTRICAL SLD

DATE	14-09-2022
DRAWN BY	M.K.
CHECKED BY	S.K.
SCALE	NTS

ESLD -01

SHEET SIZE-A3