



## American International University- Bangladesh

### Department of Electrical and Electronic Engineering

#### BAE1101: Computer Aided Design and Electrical Drafting

**Title:** Understanding and drawing the proper electric Fittings and Fixture Layout based on Civil planning.

**Objective :** To familiarize students with proper understanding of drawing electric fittings and fixture distribution based on civil planning.

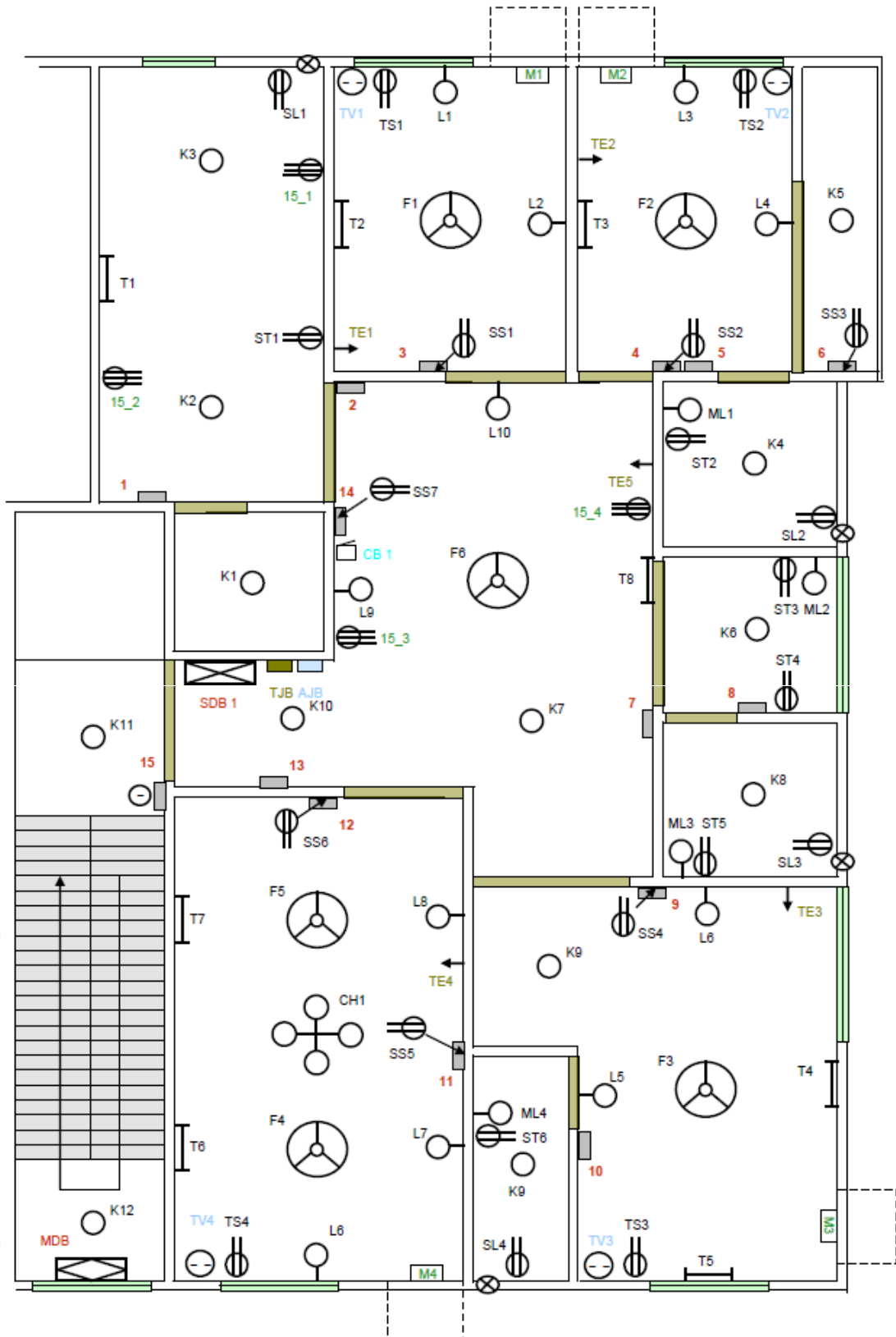
#### Instructions to be followed while designing.....

##### ☐ **Fittings and Fixture Layout :**

- ☐ First of all, place the switchboards accordingly. Note carefully the direction of door openings for this issue. Locations for SB for 'Toilets', 'Stores', 'Kitchens' should be outside of the room (where people are not supposed to stay for long or at night.)
- ☐ Provide sufficient amount of lights and fans for each rooms. If the room is fairly large then provide multiple fans, lights and even multiple switchboards.
- ☐ Every toilet and kitchen should have exhaust fans. Select suitable places for exhaust fans.
- ☐ Provide sufficient number of switched socket outlets on both switchboards and distant from the switchboards. Each switchboard around the living rooms should have at least one socket outlet. Kitchens may have a distant socket for wall mounted fans, toilets should have distant socket for electric razors, hair driers etc.
- ☐ Each living room should have distant switched socket at skirting level for TV with cable TV connectivity.
- ☐ Fair amount of telephone connectivity options should be allocated.
- ☐ Calling Bell position should be wisely chosen. It should be placed near the common place and distant from the bed rooms if possible.
- ☐ SDB and MDB positioning should be wise. MDB needs to be monitored by the meter-readers so, it should be placed in a easily accessible place where sufficient lighting arrangement is ensured.
- ☐ The symbols to be used for Fittings and Fixture Layout are rather flexible. You can define your own symbols. You must also attach the 'Legend' which would suggest the meanings that your symbols carry.

## SAMPLE DRAWING:

### Fittings & Fixture Layout



## **The symbols to be used for Fittings and Fixture Layout**

F – Fan

L – Light

T – Tube Light

K – One Kind of Light

TV – Television

TE – Telephone

M – Motor

CH – Hanging Light

ML – Multiple Light

CB – Circuit Breaker

SB – Switch Board

SS – Switch Board Socket

ST – Two Pin Socket

SL – Skirting Level Socket

TS – TV Socket

15\_1 – 3 Pin Socket (15 A)

TJB – Telephone Junction Board ;

AJB – Antenna Junction Board

C1, C2.... – No of Cables;

1,2,3..... - no of SB

SDB – Sub Distribution Board,

MDB – Main Distribution Board,

### **Apparatus:**

1. PC
2. AutoCAD software

### **Discussion and Conclusion:**

Interpret the findings and determine the extent to which the experiment was successful in complying with the goal that was initially set. Discuss any mistake you might have made while conducting the designing and describe ways the study could have been improved.

### **References:**

1. Kristen S. Kurland , “AutoCAD 2004, 2D Training Manual”.
2. Bob McFarlane, “Beginning AutoCAD 2004”
3. David Byrnes and Mark Middlebrook, “AutoCAD 2007 For Dummies”.