



# Andhra Pradesh State Skill Development Corporation



## AutoCAD(CIVIL)

### Column Layout



# DETAILS OF THE STRUCTURAL ELEMENTS, TITLE BLOCK AND PRINT OPTIONS

## COLUMN LAYOUT

### COLUMN:

A column or pillar in architecture and structural engineering is a structural element that transmits, through compression, the weight of the structure above to other structural elements below. In other words, a column is a compression member. A vertical member whose effective length is greater than 3 times its least lateral dimension carrying compressive loads is called a column.

- The plan which contains column size and position is called a column layout plan. The column layout plan is very important for a Structure. Because without column layout it's impossible to locate the actual location of the structure.

### Columns are classified into four types

- Based on Shape
- Based on a type of reinforcement
- Based on type of loading
- Based on Slenderness ratio

#### Based on Shape

- Square or Rectangular Column
- Circular Column
- L-Type Column
- V-Type Column
- T-Type Column
- Hexagon Column
- Arch Type Column
- Y-Type Column
- Y-Type Column with Arch

#### Based on a Type of Reinforcement

- Tied Column
- Spiral Column
- Composite Column

#### Based on the Type of Loading

- Axially Loaded Column
- Eccentrically Loaded Column
  - 1) Uniaxial
  - 2) Biaxial

#### Based on Slenderness Ratio

- Short Column
- Long Column



## Column Layout

Basically, the column layout plan is drawn by hand or AutoCAD. AutoCAD software is the most popular software for drawing.

Here the basics of column layout plan drawing in AutoCAD have been shown in the following steps.

1. Column shape choice.
2. Draw the column.
3. Fixed the column location.
4. Set the grid line.
5. Numbering the grid line.
6. Set the dimension with respect to the grid line.
7. Numbering the column.

## EXAMPLE

