

Q1 What is the importance of various types of drying in building construction?

DRAWING:-

It is a form of visual art in which a person uses various drawing instrument to mark a paper or another two dimensional medium. A drawing instrument releases a small amount of material onto a surface, leaving a visible mark.

Purpose :-

Drawing can do amazing stories things. They can tell stories, educate

inspire, reveal, entertain and inform.

Advantages:

- It enhances your ability to actually see what you are looking at, rather than letting your memory or imagination fill in the blanks.
- complete shape of object can be represented.
- lesser times consumed drafting.
- lesser space is consumed for their storage.
- It improves eye-hand coordination and that improves your ability to draw accurately what you see.

- It trains your muscles to respond in a certain way
- For those who proceed life visually, it's a great way to deal with the circumstance of life - good and bad. We have all heard of art therapy after all.

TYPES OF DRAWING:-

1. ARCHITECTURAL DRAWING:-

It is a technical drawing of a building that is used by architects. Architectural drawings can be termed as the mother of all drawing for the drawing used for construction.

- i site plan
- ii working plan
- iii sectional drawing
- iv Elevation drawing.

2 Structural Drawing:-

As the name suggests this type of drawing explains everything about structure such as strength of different part of structure, structural material, placement, grade and size of reinforcement etc.

- i excavation drawing
 - column layout
 - Plinth beam layout
 - Lintel beam layout
 - roof beam and shuttering layout.
 - roof slab layout.

3. Electrical Drawing :-

These drawings shows the location of electrical equipment and their layout in the building. It represents the detail of electrical fixtures, location of switches, fan, light and others. Moreover call bell system, fire alarm system, CCTV system etc are included.

4. Plumbing and sanitary drawing :-

These drawing give the location of sanitary & piping for water supply system, fixture and the process to connect every fixture etc.

③ PA HVAC Drawings

- These drawing are developed for building with centrally air conditioning system.
- AC layout plan (for each floor)
- equipment schedule and installation detail.

④ Public Health Drawing

- Legend and General notes
- Sewerage and rainwater layout.
- manhole schedule
- Plumbing construction details.
- water supply layout.

⑦ Finishing Drawings:-

It represent the finish type of every component of the building such as flooring pattern, marbles, tiles, painting color, false ceiling shape, plastering texture and elevation design.

Q2) How structural drawing help
in construction of multy storey
buildings?

For an engineer who is
new to designing a
multy storey building it
is important that they
follow a logical sequence
through the various stages
of the design process. Six
steps that define this seq-
uence are described below.
Rules of thumb are inc-
luded within with each step
to help the designer quickly
and efficiently arrive at

a solution that is sensible for a given set of constraints. In addition it is important for designers to understand some overarching principles of good design

so that the result is not only good sensible is also good. It is

generally prepared by registered professional engineers and based on information provided by architectural drawing. It is also included with proposed building contract documents, which guide contractors in detailing, fabricating & installing parts of structure.

The structural drawing set has different subsets.

General notes, plans, elevation, sections, and details.

→ General notes are a part of structural drawing and they

cover the codes used in design and the by laws

of the building. Typically there are no detail on

these drawing. structured

notes provide information of (steel steel or wood grade) concrete strength etc).

It shows the foundation

of floor and roof plan

of a building. These provide information like size etc.

→ Elevation show the exterior walls of building or structure. In elevation drawing you can find the height of building and structural properties of element present in a wall and that can't be seen in plan drawings.

→ section plans are referenced in the plan view drawing and provide information about elements that can't be seen in plan drawing. The section usually cut through walls or structural elements

that are not a typical
and the constructor needs
to be aware of.

These details provide particular
information on how to
construct or connect the
structural ~~etc~~ elements. The
details can be reference in
plans, elevation and sections.

Q3

What are the various components of plumbing drawings? Briefly describe each component?

Plumbing Drawing:-

These drawings show water supply and sewerage system of any building, indicating the place of pipelines. e.g. (PVC & UPVC) etc.

A complete plumbing system provides an adequate supply of water and removes wastewater properly.

Principles:-

- 1. water supply system
- 2. wastewater and waste removal system
- 3. plumbing fixtures.

→ wastewater and other wastes are carried to the sanitary sewer and septic tank through the waste removal system.

→ These pipes are isolated from the water supply system and must be sized for sufficient capacity, have proper slope and have provisions for cleanouts.

→ It is practical to drain as many of the fixtures as possible into a single main drain.

→ The drainage system is not under pressure and depends on gravity to carry the waste into the sewer.

→ A vertical drain pipe that collects a waste from one or more fixtures is called a soil stack.

→ Every house must have at least one main stack generally in 3" diameter.

→ Each bathroom must have a main stack.

→ Secondary stacks are $1\frac{1}{2}$ " diameter.

① ~~branch~~ main.

Fixtures are connected to the stack using a branch main.

→ All stacks are extended and being equal emptied into the house drain.

→ All structures must have at least one house drain, but many have several.

Traps

The traps ~~most~~ commonly used with plumbing fixture is the P-trap. Traps are required because they prevent sewer gas from entering a building causing bad smell and serious illness.

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→ Each bathroom must have a main stack.

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The term trap seal refers to the water being held in the bent portion of a fixture trap.

House Traps:

Building traps are provided in the main building sewer. It shall be provided with a drainout and relief vents or frost air intake on the inlet side of the trap.

Soil stacks:

A soil stack is a vertical drain pipe that carries soil waste from sanitary new units (i.e. toilets).

Waste Stacks:-

A waste stack is any other vertical drain pipe that doesn't carry soil from a sanitary fixture.

Plumbing Cleanout:-

It is a cleanout fitting with a removable plug used in wastewater system. It is designed to help keep remove any types of debris that could cause any type of stoppage in sewerage lines.

Plumbing Plans:-

It is a plan that show the complete plumbing system. The plumbing plan

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show the location, sizes and types of all plumbing fixtures, pipes etc

The plumbing plan should include

- waste line and vent stacks
- drain and plumbing fixture locations;
- size and type of pipe to be used;
- A plumbing fixture schedule
- symbols legend;
- General notes.

A plumbing plan is required for each floor of the house.

- i Domestic water connection to overhead tank.
- ii water main
- iii main connection
- iv Communication pipe.
- v meter control valve.
- vi water meter.
- vii service pipe
- viii suction pipe with foot valve
- ix Pump
- x check valve (non return)
- xi delivery pipe (pump line).
- xii overflow.
- xiii distribution line
- xiv branch line
- xv Apparatus connectors
- xvi Tap
- xvii water heater
- xviii Hot water supply line

The end