**Causes of Moisture in a Building**

One of the most costly issues facing the construction industry today is water and moisture problems. And that’s why building codes often require water resistive barriers.

Building assemblies get wet in four ways:

1) **Improper bulk water management**. Even a small wall leak that allows rain, snow, or groundwater into a wall cavity can soak the materials in a matter of minutes. But it takes days, weeks, even months for them dry out. Drying is typically very slow. This is the most common type of moisture that leads to moisture failure.

2) **Buildings can also get wet by water vapor from air movement through building assemblies that are exposed to humid indoor or outdoor conditions.**

Air contains moisture, and when air moves from one location to another it carries that moisture with it. Then, when it hits a cold surface, it can condense, causing moisture damage. We can either avoid the condensation by stopping the air movement, or by designing building assemblies to control the temperature of building surfaces.

Diffusion is the transfer of moisture from a wetter to a dryer location through a solid (kind of like conduction for water vapor). This is a less common cause of major moisture failure than bulk water management.

Building materials can only dry by evaporation, which is the process of liquid turning into a vapor at the surface of a building material. This is a very slow process, which means that evaporation is not a very efficient way for building materials to dry out.

3) **Moisture in the soil**

Weather or irrigation can provide very wet soil conditions near buildings. The water in soil is easily wicked towards the building, especially if the top of the soil is slopped towards the building. Building materials that are susceptible to moisture failure like wood beams or siding should be kept away from soils near the building. A tall enough concrete foundation is very important for this reason.

4) **Leftover moisture from construction materials**

Moisture can be accidently implanted in building assemblies if moisture originated from the building materials in the first place. This is an unfortunate issue that is sometimes hard to remedy due to the moisture being in a location in the assembly that it was not necessarily designed for. This can be avoided with just-in-time delivery of materials and dry weather building conditions.