Coffee Break Training - Fire Protection Series

Fire Alarms and Detection: Fire Alarm Plan Submittals

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Learning Objective: *The student shall be able to identify the minimum submittal requirements for fire alarm systems.*

Code officials may have the responsibility to review fire alarm system plans before the equipment is installed.

The plans submitted to the code official should be an accurate representation of what the designer intends to install. Of course, during construction or installation there may be field modifications that must occur, but good planning and forethought will keep those to a minimum.

At the very least, the designer should submit two types of fire alarm plans: a **riser plan** and a **point-to-point plan**.

The fire alarm **riser plan** is a simple one-line representation of:

- the number and type of alarm devices (initiating and notification appliances);
- the number and type of supervisory devices;
- the number and type of circuits (styles and number of conductors);
- the number and type of end-of-line devices;
- the symbols for devices and equipment;
- the connection to the primary power source; and
- the connection to the off-premises monitoring service.

Manufacturer's product literature on this fire alarm control panel is important information for the plan examiner to review.

The riser plan is a useful tool to summarize the anticipated installation, but does not provide enough detail to approve a system.

By including a **point-to-point plan**, the designer shows where devices will be installed in relationship to the design of the building. With this plan, the authority having jurisdiction (AHJ) can compare device installations to their rooms.

The point-to-point plan should include

- the exact location where detection and notification appliances will be installed so spacing limitations can be verified;
- the location of end-of-line devices to determine that they are properly located at the end of a Style A, B, or C initiating circuit;
- the location of the fire alarm control panel and remote annunciators to ensure they are conveniently placed;
- the location of supervisory devices to ensure all supervisory functions are addressed; and
- the general routing of fire alarm circuit wiring so paths and connections can be inspected.

The code official also should request copies of manufacturers' product literature (commonly called "catalog cut sheets") on all devices that will be installed. The cut sheets will provide detailed information on listings, product limitations, and performance.