FIRE ALARM AND INTRUSION DETECTION SYSTEMS

Fire alarm systems use three basic types of signals:

- Alarm, a signal indicating fire. This includes:
  - Manual fire alarms;
  - Discharge of automatic sprinkler or other fixed extinguishing systems;
  - Automatic fire alarms, such as heat, smoke or flame detectors.
- Supervisory, a signal that indicates an “off normal” condition in a fire protection system and its return to normal. This includes:
  - Control valve tamper for automatic sprinkler or other fixed extinguishing systems.
  - High and low air pressure on dry pipe or preaction sprinkler systems.
  - Private water supplies, such as gravity tank level and temperature or electric motor-driven fire pump running and power failure.
  - Public water supplies, such as low public water pressure.
  - Low building temperature for buildings with wet pipe sprinkler systems; for dry pipe, preaction, or deluge valve closets; and for fire pump houses located in areas subject to freezing. Such devices should be located in portions of the facility most likely to become dangerously cold first, such as remote stairwells or spaces above suspended ceilings. They should be set at high enough a temperature that facility personnel will be able to respond to and correct a loss-of-heat condition before damage occurs.

    Supervision of the operating status of a facility’s boiler or furnace may be used to supplement low building temperature supervision, but should never be used in place of specifically located low building temperature detectors, as it is possible for a portion of the heating system to become ineffective while the boiler or furnace continues to operate. In particular, if the boiler has insufficient water, prompt detection may prevent severe boiler damage which might have resulted in a fire.
  - Guard patrol tour delinquency.
- Trouble, a signal indicating the loss of fire alarm system power supply or circuit integrity.

There are five basic types of fire alarm systems. These are protected premises, central station, proprietary supervising station, remote supervising station and auxiliary systems. All five types are addressed in NFPA 72. Also see PRC.11.1.1.0.

Intrusion detection systems use two basic types of signals:

- Intrusion, a signal indicating unauthorized entry.
- Trouble, a signal indicating the loss of intrusion detection system power supply or circuit integrity.