Village of Gilberts

Plan Review Guide for Fire Alarm Systems

Project Name: _____
Project Address: _____
Contractor: _____
Phone Number: _____
Fax: _____
E-mail: _____

Fire alarm system installation information shall be provided on the appropriate architectural and electrical drawings. A copy of this guide shall be attached to the submitted drawings. A review will not be conducted without this guide being submitted with the drawings.

The following items shall be included on the drawings. Place N / R next to the item(s) not required by the code. Place N / A for items non-applicable.

1. _____ One copy of the site plan approved by the Village of Gilberts Engineers.

2. _____ Equipment location and floor plan drawing indicating:
   - _____ A. Location dimensioning of devices (pull stations, tamper switches, detectors, etc.)
   - _____ B. Location dimensioning of appliances (bells, horns, etc)
   - _____ C. Types of devices and appliances
   - _____ D. Control location(s) (FACP, annunciator, transmitters, transponders, etc)
   - _____ E. Type of control
   - _____ F. Ceiling shape and surface cross section or Note at detector locations (level shape, smooth surface, etc)
   - _____ G. A symbol list (with equipment identification) showing:
     - _____ 1. Symbols used on drawing.
     - _____ 2. Symbol description.
     - _____ 3. Device manufacturer's make & model.
     - _____ 4. Linear footage detector rating for spacing in "High air movement areas" if applicable.

3. _____ An elementary wiring diagram showing:
   - _____ A. Arrangement of ALL devices and appliances with respect to control units and FACP.
   - _____ B. Typical data (specification, cut sheets) on:
     - _____ 1. Control panel
     - _____ 2. Power supply circuit
     - _____ 3. Alarm initiating circuits
     - _____ 4. Alarm indicating circuits
     - _____ 5. Ancillary functions (HVAC shutdown. Elevator recall, door closers, etc.)
   - _____ C. Zone configuration and identification (as it appears on FACP and/or annunciator) for each zone.

_____ D. System Primary and Secondary/Stand-by Electrical:
_____1. Power Source and Voltage
_____2. Connection to System
_____3. Electrical Power to System
_____ E. Alarm Circuit Load Consumption of All Circuits to Include:
_____1. Voltage Drop
_____2. Acceptable Limits
_____3. Quantity of Signaling Appliance on Furthest Circuit and Current Consumption
_____4. Length of Furthest Circuit and Resistance of Wire or a Note Specifying Maximum Circuit Length

4._____ A Point to Point System Wiring Diagram Showing:
_____ A. Interconnection of ALL Devices and Appliances
_____ B. External Connection of Modules in Control Panel
_____ C. Conduit Connection and Size
_____ D. Type, Size, Manufacturers Name and Approved List of Wire or Cable

Any of the following items required by code/standards, or which are otherwise part of the design, SHALL be included on the drawings. Place your initials beside applicable items to indicate necessary information is included on or submitted with the plans.

5._____ Detector Protection in Air/Heat Ducts

6._____ Detector Activation of Magnetic Door-Releasing Hardware

7._____ Detector/Fire Alarm System Activation of HVAC Shutdown

8._____ Fire Sprinkler Supervisory/Tamper Switch Connection to Fire Alarm System

9._____ Sprinkler tamper switch is to cause light and buzzer indication at Annunciator panel and at the remote supervision site when such is required. Activation of tamper alarm shall not cause operation of door, chimes, bells, or sprinkler flow alarm.

10._____An information plate reading "LOCAL ALARM ONLY-THIS ALARM DOES NOT SUMMON THE FIRE DEPARMTENT – IN CASE OF FIRE CALL FIRE DEPARTMENT AT 9-1-1" is installed at each manual pull station for a local alarm system.

11._____Manual fire alarm boxes (pull stations) shall be at every exit on every floor.

12._____Fire alarm system voice speakers/audible devices are being used for purposes other than evacuation only when allowed by the code.

13._____Emergency telephones with individual cabinets for use by the Fire Department (Or other emergency responders) are installed.

Place your initials beside the appropriate answer for item 14.

14. Yes___ No___ Will there be any STORAGE, USE HANDLING, DISPENSING, OR MIXING of any hazardous materials or flammable or combustible liquids inside the building?

Complete items 15 thru 21 if you answered "YES" to item 15. Place your initials beside each item that applies or place "N/R" after any time not required by the fire code. Please note that if the item applies, information pertaining to the item shall be included on or submitted with the drawings.

15.____A manual pull station or approved emergency signal device is shown outside of each interior exit door of hazardous material storage buildings, rooms, or areas.

16.____Activation of the manual pull station or device shall sound a local alarm.

17.____Manual alarm, emergency signal, detection or automatic fire extinguishing systems (including fire sprinklers) shall be supervised by an approved central, proprietary or remote station service; or shall initiate an audible and visual signal at a constantly attended location.

18.____A smoke detection system shall be provided in rooms or areas where highly toxic compressed gases are stored indoors, and activation shall sound a local alarm.

19.____A smoke detection system shall be installed in all a liquid and solid oxidizer storage areas (except when stored in detached storage buildings with an automatic fire extinguishing system) and shall sound a local alarm.

20.____An approved automatic smoke-detection system shall be provided when the amount of hazardous materials stored, dispensed, handled or used in one control area exceeding exempt amounts specified in Fire Code.

21.____When hazardous materials rated 3 or 4 in accordance with Fire Code are transported through exit corridors or exit enclosures, there shall be an emergency telephone system, a local manual alarm or an approved signaling device at not more than 150 feet intervals and at each exit doorway throughout the transport route. The system shall initiate a local audible alarm and the signal shall be relayed to an approved central, proprietary or remote station service or constantly attended location.

The following information shall be submitted as an attachment to each set of drawings submitted. Place your initials besides each item to indicate that the information has been attached.

22.____Functions to take place upon operation of devices.

23.____A battery calculation sheet (with all values used) showing that battery power is adequate for 24 hours of stand-by power and 5 minutes of alarm power.

24.___ A separate written and signed report advising that the following system requirements have been met:

_____A. The system has been designed to meet all applicable Fire Code and NFPA requirements.

_____B. All system components are compatible and are listed or approved as such.

_____C. All calculations for the following items are complete, accurate and adequate

___1. Voltage Drop of Circuits

___2. Current Protection

___3. Standby and Alarm Battery Calculations

_____D. The system has alarm verification features are in accordance with NFPA 72.

25.___Cut sheet literature describing devices, controls, appliances and other equipment, to include but not limited to information on

_____A. Device, appliance and equipment ratings and spacing requirements

_____B. Device, appliance and equipment compatibility

_____C. Listings/Approvals

_____D. Device/Appliance/Equipment features to be utilized in the system