



Division 283110

Fire Alarm Systems

DESIGN GUIDE

1 General

1.1 Introduction

- A. This section applies to the following:
 - 1. Fire Alarm System
- B. Furnish a complete addressable Fire Alarm System. Include a Fire Alarm Control Panel, remote annunciator panel, manual pull stations, automatic fire detectors, combination speaker/strobes, annunciator, and remote control devices.
- C. Fire alarm system shall be equipped with voice annunciation. Provide remote annunciator panel with microphone at the fire department building access point.
- D. Fire alarm system shall be equipped with separate visual notification devices labeled “alert” to be utilized for mass notification. The use of stacked dual strobes for “fire” and “alert” is permitted. Audible mass notification alert messages shall be programmed into the fire alarm system voice annunciation system for mass notification.
- E. Provide a ceiling mounted strobe in each private office.
- F. Fire alarm system shall provide full coverage detection.
- G. Each building IT room shall be provided with smoke detection.
- H. Open area smoke detection such as OSID is preferred for large volume spaces in lieu of ceiling mounted spot detection.
- I. The use of air sampling systems should be avoided where other alternatives are available for smoke detection.



- J. Campus fire alarm systems are networked through the use of fiber as follows:
 - 1. Academic buildings: Campus ES network with singlemode fiber.
 - 2. Auxiliary buildings: Separate network from Campus ES network with singlemode fiber. Confirm with CWU ITM on each project.
- K. Design of fire alarm fiber optic cabling shall be performed by the telecom designer. The fire alarm designer shall coordinate with the telecom designer to verify that appropriate fiber optic cabling and pathway is being designated for networking of the new FA panel.
- L. FA designer shall meet with CWU ITM to discuss which campus IT sector hub the new fire alarm panel will connect
- M. FA designer shall meet with CWU FPM to identify where in the loop the new building/panel should be inserted.

2 Materials

2.1 General

- A. Manufacturers: Simplex or approved equal.
- B. Fire alarm control panel shall be Simplex 4100ES or approved equal with touch screen.
- C. Fire alarm remote annunciator panel to be provided with integral microphone for voice annunciation.
- D. Where allowed by code, detection and notification device color is preferred to be white.

2.2 Fiber Network

- A. FA panel network cabling shall be singlemode fiber. Confirm network cabling type with CWU ITM for each project.



3 Execution

3.1 Installation

- A. FA contractor shall initiate and participate in a preinstallation meeting with the electrical contractor, telecom contractor and CWU to coordinate the installation of conduit, boxes, device cabling and FA panel fiber for the project.
- B. All wiring shall be installed in conduit.
- C. All wire installed must be approved for "Power Limited" fire alarm use under Article 760 of the National Electrical Code.
- D. Where allowed by code, notification devices shall be ceiling mounted.
- E. Fire alarm control panel shall be located in the main electrical room.
- F. Battery cabinets shall be located such that a ladder is not required for access and maintenance.
- G. The fire alarm contractor shall not install fiber optic cabling for the FA panel. This will be provided and installed by the telecom contractor in compliance with the Division 27 requirements.

3.2 Testing

- A. The completed system shall be subjected to one required test. The test shall be witnessed by the owner's representative and the AHJ. This test shall be completed after the system has been on line for minimum of seven (7) days

4 Appendix

4.1 Reserved for future.

