

SECTION 16720 - FIRE ALARM SYSTEM

PART I - GENERAL

1.01 STANDARDS

- A. Furnish and install complete, electrically supervised, closed circuit fire alarm system when required by the local authority having jurisdiction.
- B. The fire alarm system shall conform to the requirements in this specification, Section 16A, Electrical General Conditions, and comply with the latest adopted edition of the following:
 - 1. NFPA 72 (Chapters 1-7 as applicable)
 - 2. NFPA 90A
 - 2. Local building & fire codes (as applicable)
 - 3. The International Building Code
- C. All equipment comprising the fire alarm system shall be listed, labeled, or approved by Underwriters Laboratories, Inc. for use as fire alarm equipment.

1.02 DESCRIPTION OF WORK

- A. Provide a complete, supervised fire alarm system including conduit, wire, boxes, control panel, smoke detectors, pull stations, audio/visual signal devices, lock boxes, and sprinkler waterflow and supervisory switches. The sprinkler switches shall be provided under Section 15, Work (See letter H - under 2.01 Fire Alarm Devices), and connected to the fire alarm system by the fire alarm supplier.
- B. Walgreens' preferred fire alarm vendors are ADT Security Services, Inc. @ (800) 640-9390 and F.E. Moran @ (586) 228-5788. (See drawing E1.6 for fire alarm vendor territories). It is mandatory that they monitor the fire alarm system when required by the local code authority. They will provide a full turnkey price on the fire alarm system. They will require the 8 ½ x 11 layout shown on the E1. 6 be faxed to them (ADT @ (630) 455-0139 and F. E. Moran @ (586) 228-5758), please include your company letterhead, contact person, store number, city and state for each new location. The fire alarm vendor needs at least five days to provide fire alarm price. Their Fire Supervisors will contact the local authority having jurisdiction to determine the exact minimum requirements. All materials and labor required to meet local fire safety regulations, codes, adopted ordinances, and local requirements of the local authority having jurisdiction. Whether enumerated herein, shown on plans, or not, shall be furnished.
- C. The complete fire alarm system, including installation, is the responsibility of the Contractor. Contractor to consult with local Fire Officials in order to determine the complete system.
- D. Duct smoke detectors (SD) are furnished and factory installed with some HVAC units. Refer to section 15500 of the specifications and drawings for details.
- E. The Fire Alarm Contractor shall provide power wiring (24 volt) to all smoke detectors. The Fire Alarm Contractor shall also provide an operational remote test/reset station for all duct smoke detectors. Where an approved fire alarm system is installed in the building, all duct smoke detectors shall be connected to the fire alarm system as required by NFPA. The Fire Alarm Contractor shall wire and arrange the HVAC units to shutdown on an alarm output from the fire alarm panel, when required by code.
- F. The Fire Alarm Contractor may use the SDs that were factory installed on the HVAC units. The Fire Alarm Contractor shall supplement those factory installed smoke detectors as necessary to provide a complete operating fire alarm system that fully complies with applicable codes, ordinances, the local fire department, local inspectors and other authorities having jurisdiction.

- G. If approved by the local authority having jurisdiction, the fire alarm system supplier may eliminate conduit and run approved type open wiring above suspended ceilings and within exposed barjoists. Where wiring is required down exposed walls in warehouse or stock areas, wiring is to be installed in EMT to the height of 15 feet above floor level. All wiring supports and installation shall conform to the National Electrical Code.
- H. If Walgreens' preferred vendors (ADT Services, Inc. Or F. E. Moran) do not install the fire alarm system, they must be contacted at least eight (8) weeks prior to final inspection to contract the commencement of the fire alarm monitoring. **There is a program and testing fee associated with this service, to ADT Security and F. E. Moran based upon the amount of lead time given.** If ADT or F. E. Moran do not perform the installation of the fire alarm system, the following items are required by the Fire Alarm supplier:
 1. Reprogram contract must be signed and returned a minimum of 60 days before scheduling on site.
 2. The entire fire alarm installed completely, includes wiring to fire panel, wiring the phone jacks to panel and a full acceptance test by the fire contractor.
 3. Phone lines must be active to the site before scheduling ADT to commence fire alarm monitoring.
 4. Fire Alarm supplier is required to meet fire alarm vendor (ADT or F. E. Moran) on site with copies of permit, approved drawings with riser diagram, battery calculations, voltage drops, wire legend and any other requirements the Authority having Jurisdiction requires. A Certificate of Completion (use NFPA 72 form) form filled out before ADT or F. E. Moran reprograms the fire control for monitoring.
 5. Fire Alarm supplier is responsible for Final Fire Inspection, after ADT or F. E. Moran is monitoring the location. **There is no re-program and test fee for the fire alarm system if ADT or F. E. Moran does the turnkey system.**
- I. The electrical contractor shall provide power to and the shut down associated with duct detectors (see 2.01 - letter G).

1.03 QUALITY ASSURANCE

- A. Provide products which have been tested, listed, and labeled by Underwriters Laboratories, Inc., which comply with NEMA standards, and are approved by Factory Mutual Research.

PART II - PRODUCTS

2.01 FIRE ALARM DEVICES

- A. A fire alarm control panel shall be Silent Knight, SK-5208, Fire Lite MS-9200UDSL, Fire Lite MS-UD, Fire Lite MS-10UD, including dual battery harness, dual phone line switches, and two 8-foot telephone cords, Telephone jacks (if required) shall be RJ31X, ground GND. Telephone lines (2) are supplied by the Walgreens. The fire alarm control shall include battery backup, BP-BPI7-12-T2, BP-BP7-12-T2, BP-BP26-12-T2; Fire Lite BB- 17, Fire Lite BB55 (if required); Silent Knight model 5217, zone expander module, Silent Knight model 5495, Fire Lite FCPS24F, (if required), and direct connect module, Silent Knight model 5235 (if required).
- B. Fire alarm annunciator shall be Remote keypad/Annunciator, Silent Knight model 5235, Fire Lite LCD80F, or LED-10 (if required)..
- C. Manual pull station shall be Fire Lite, model BG12LX, BG12 (f required).
- D. Fire alarm indicating devices shall be horn/strobe, Wheelock AS Series, MT Series, and RSS Series (if required).

- E. Smoke detectors shall be Sentrol SE-429CT, Sentrol SE-449CT, Fire Lite SD355. Included shall be one (1) End of Line power supervision relay, Silent Knight model EOL-1224RLY for each zone of smoke detectors (if required).
- F. Heat detectors shall be Edwards ED-280B-PL, or Fire Lite H355 (if required).
- G. Duct smoke detector, supplied and installed by the mechanical contractor, shall be System Sensor model DH100ACDLP. Included with each detector shall be one (1) Remote Indicator/Test Switch, System Sensor model RTS451, one (1) set of sampling tubes, System Sensor models ST5 or ST10. Included shall be one (1) End of Line power supervision relay, Silent Knight model 160150, for each zone of detectors. Acceptable alternate manufacturer: GE/Telaire Series TSD. A remote disconnect switch (AC-RP44) shall be installed in the electrical room for the duct smoke detectors. This switch will only disconnect monitoring of the alarm/supervisory signal to the Fire Alarm Control Panel, and will not affect the function of the duct smoke detector. Instructions shall be mounted on the front of the surface mount box.
- H. The fire-suppression system contractor shall provide waterflow and valve tamper switches.
- I. Recessed Knox Box #3200-R, with UL listed alarm tamper switch, dark bronze finish. Recessed Knox Box shall be installed 6'-0" above top of foundation, near main entry as directed by local fire officials.

PART III - EXECUTION

3.01 INSTALLATION

- A. The fire alarm control panel shall be mounted where shown on drawings. A dedicated 120 VAC, 20 ampere circuit, termination to the Fire alarm control panel shall be provided by the electrical contractor. Coordinate connection to the telephone lines (2) provided by owner. The remote keypad/annunciator shall be mounted where required by local code and/or authority having jurisdiction.
- B. The fire alarm system shall be installed under the supervision of the systems' supplier. Prior to final inspection, the supervisor shall test all operating features and consequently make all necessary adjustments and corrections to the equipment comprising the fire alarm system provided as work under this section.
- C. Install complete wiring system as required for the fire alarm system. Conceal wiring except in stockrooms and areas where other conduit and piping are exposed.
- D. Code all conductors appropriately and permanently, by number and/or color, for the purpose of identification and servicing of the fire alarm system within the control panel, and at each point of termination outside the control panel.
- E. Local fire authorities may require the addition and relocation of certain devices. Contractor to review all device locations with the proper authorities prior to installation. The location of strobes may require the coordination of the fixture plan, so they are visible as per the local authorities.

END OF SECTION

