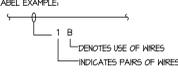
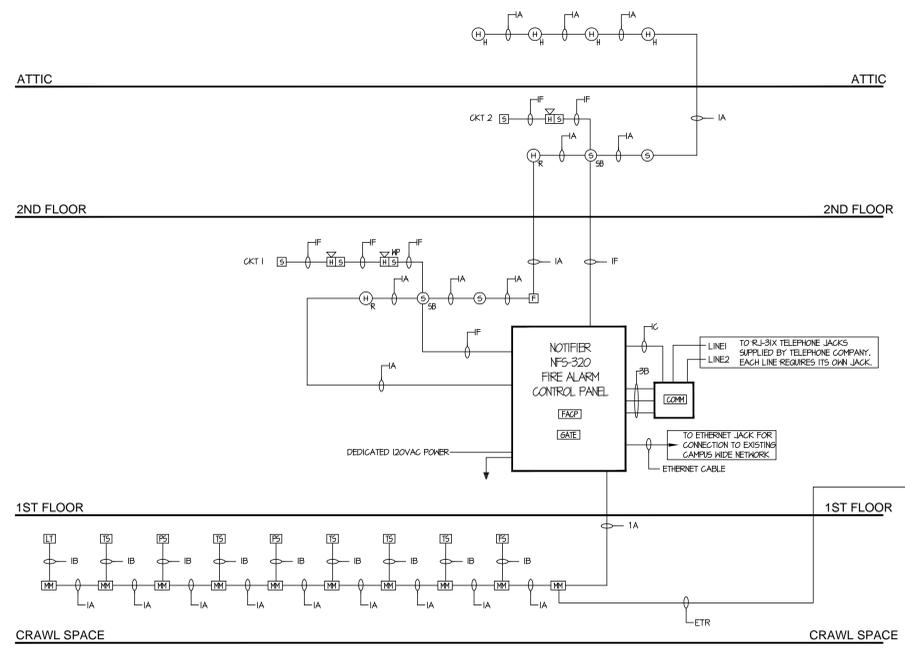


WIRE GUIDE		
LYR	DESCRIPTION	TYPE
A	SLC LOOP	16AWG UTP
B	CONVENTIONAL ZONE	16AWG UTP
C	24V DC POWER	16AWG UTP
D	EIA-485 COMMUNICATION (ACS MODE)	16AWG STP
F	AVV CIRCUIT	16AWG STP

- NOTES:
- RISER DIAGRAM SHOWS NUMBER OF CIRCUITS AND WIRE SIZES. ACTUAL QUANTITY OF DEVICES IS SHOWN ON THE FLOOR PLANS. DEVICES TO BE ADDRESSED IN FIELD.
  - LABEL EXAMPLE:



- ABBREVIATIONS:
- STP= SHIELDED TWISTED PAIR
  - UTP= UNSHIELDED TWISTED PAIR
  - FW= UNSHIELDED TWISTED PAIR
  - SLC= SIGNALING LINE CIRCUIT
  - NAC= NOTIFICATION APPLIANCE CIRCUIT
  - CKT= CIRCUIT
  - AWG= AMERICAN WIRE GAUGE
  - ETR= EXISTING WIRING TO REMAIN
  - IF= MOUNTED UNDER RAISED FLOOR
  - ROK= RATE OF RISE
  - RM= ROOM



**NOTIFIER NFS-320 FIRE ALARM RISER DIAGRAM**

FIRE ALARM SYSTEM COMPONENTS			
SYMBOL	DEVICE	MANUFACTURER	MODEL NO.
[FAACP]	FIRE ALARM CONTROL PANEL	NOTIFIER	NFS-320
[GATE]	GATEWAY	NOTIFIER	NFN-6H-EM-3
[COMM]	DIGITAL COMMUNICATOR	NOTIFIER	4H-UD
[MPS]	MANUAL PULL STATION	NOTIFIER	NEB-L2LX
[S]	ADDRESSABLE, PHOTOELECTRIC SMOKE DETECTOR	NOTIFIER	FSP-85H
[S <sub>SB</sub> ]	ADDRESSABLE, PHOTOELECTRIC SMOKE DETECTOR WITH SONDER BASE	NOTIFIER	FSP-85H
[T <sub>A</sub> ]	ADDRESSABLE, RATE OF RISE, HEAT DETECTOR	NOTIFIER	FSP-85R
[T <sub>H</sub> ]	ADDRESSABLE, HIGH TEMP. RATE OF RISE, HEAT DETECTOR	NOTIFIER	FSP-85H
[S]	ADJUSTABLE CANDELA STROBE LIGHT	SYSTEM SENSOR	SR
[S]	COMBINATION, ADJUSTABLE CANDELA, HORN AND STROBE	SYSTEM SENSOR	F2R
[S]	COMBINATION, ADJUSTABLE CANDELA, HORN AND STROBE HEATHERPROOF	SYSTEM SENSOR	F2R
[M]	ADDRESSABLE MONITOR MODULE	NOTIFIER	FMM-1
[T]	LOW TEMPERATURE SWITCH	POTTER	R15-0
[S]	TAMPER SWITCH	BY FIRE PROTECTION CONTRACTOR	
[S]	FLOW SWITCH	BY FIRE PROTECTION CONTRACTOR	
[S]	PRESSURE SWITCH	BY FIRE PROTECTION CONTRACTOR	
[V]	POST INDICATOR VALVE	EXISTING	

**ELECTRICAL WIRING SPECIFICATIONS**

ALL WIRING SHALL BE IN STRICT COMPLIANCE WITH THE NATIONAL ELECTRICAL CODE ESPECIALLY ARTICLE 760 AND THE MANUFACTURER'S WRITTEN GUIDELINES. ALL WIRING TO BE IN LISTED WIRING GAUGES, SHIELDING AND CHARACTERISTICS AS DESCRIBED ON RISER AND WIRING DIAGRAMS.

- NON-POWER LIMITED FIRE ALARM (NFPA) CIRCUITS
  - NFPA CIRCUIT POWER SOURCE REQUIREMENTS
    - (A) POWER SOURCE: THE POWER SOURCE OF NON-POWER LIMITED FIRE ALARM CIRCUITS SHALL COMPLY WITH CHAPTER 7 THROUGH 4 OF THE NATIONAL ELECTRICAL CODE AND THE CIRCUIT VOLTAGE SHALL BE NOT MORE THAN 600 VOLTS NOMINAL.
    - (B) BRANCH CIRCUIT: AN INDIVIDUAL BRANCH CIRCUIT SHALL BE REQUIRED FOR THE SUPPLY OF THE POWER SOURCE. THIS BRANCH CIRCUIT SHALL NOT BE SUPPLIED THROUGH GROUND-FAULT CIRCUIT INTERRUPTERS OR ARC-FAULT CIRCUIT INTERRUPTERS. CIRCUIT BREAKERS SHALL BE MARKED IN RED AND LOGGED. LOCATION AND NUMBER OF CIRCUIT BREAKER TO BE MARKED ON THE FIRE ALARM CONTROL PANEL.
    - (C) ONLY COPPER CONDUCTORS SHALL BE PERMITTED TO BE USED FOR FIRE ALARM SYSTEMS.
    - (D) INSULATION INSULATION ON CONDUCTORS SHALL BE SUITABLE FOR 600 VOLTS. CONDUCTORS LARGER THAN 1/2" AWG SHALL COMPLY WITH ARTICLE 310.
    - (E) ALL NON-POWER LIMITED WIRING SHALL BE RUN IN METALLIC RACEWAY. WIRING SHALL BE IN GAUGE MINIMUM TYPE TRN. NOTE: NON-POWER LIMITED WIRING FOR THIS PROJECT LIMITED TO PRIMARY 120VAC FIRE ALARM CONTROL PANEL DEDICATED BRANCH CIRCUIT.
  - POWER LIMITED FIRE ALARM (PLFA) CIRCUITS
    - (A) PLFA WIRING METHODS AND MATERIALS, POWER-LIMITED FIRE ALARM CONDUCTORS AND CABLES SHALL BE INSTALLED AS FOLLOWS.
    - (B) WIRING SHALL BE INSTALLED IN RACEWAY OR FISHED IN CONCEALED SPACES. NO EXPOSED WIRING SHALL BE INSTALLED. CABLE SPLICES OR TERMINATIONS SHALL BE MADE IN LISTED FITTINGS, BOXES, ENCLOSURES, FIRE ALARM DEVICES, OR UTILIZATION EQUIPMENT.
    - (C) PASSING THROUGH A FLOOR OR WALL, IN METAL RACEWAYS OR RIGID NONMETALLIC CONDUIT WHERE PASSING THROUGH A FLOOR OR WALL TO A HEIGHT OF 2 1/2" (1/2") ABOVE THE FLOOR, UNLESS ADEQUATE PROTECTION CAN BE AFFORDED BY BUILDING CONSTRUCTION.
    - (D) PLFA WIRING SHALL BE KEPT SEPARATED FROM NFPA WIRING AS DESCRIBED BY ARTICLE 760 OF NATIONAL ELECTRICAL CODE.
    - (E) POWER-LIMITED FIRE ALARM CIRCUIT CONDUCTORS SHALL NOT BE STRIPPED, TAPPED, OR ATTACHED BY ANY MEANS TO THE EXTERIOR OF ANY CONDUIT OR OTHER RACEWAY AS A MEANS OF SUPPORT.
    - (F) APPLICATIONS OF LISTED PLFA CABLES
      - (1) THE BUILDING COVERED BY THIS PROJECT CONTAINS NO FLETHM AREAS!
      - (2) FLETHM CABLES INSTALLED IN DUCTS, FLETHMS, AND OTHER SPACES USED FOR ENVIRONMENTAL AIR SHALL BE TYPE FPLC.
      - (3) RISER CABLES INSTALLED IN RISERS, VERTICAL RIMS AND PENETRATING MORE THAN ONE FLOOR, OR CABLES INSTALLED IN VERTICAL RIMS IN A SHIRT SHALL BE TYPE FPLC FLOOR PENETRATIONS REGARDING TYPE FPLC SHALL CONTAIN ONLY CABLES SUITABLE FOR RISER OR FLETHM USE.
      - (4) OTHER WIRING WITHIN BUILDINGS, CABLES INSTALLED IN BUILDING LOCATIONS OTHER THAN THE ABOVE SHALL BE TYPE FPL.
- GENERAL
  - (A) ALL CONDUCTORS ARE TO BE PROPERLY TAGGED OR NUMBERED IN THE CONTROL PANEL AND CORRESPOND WITH THE CONTROL PANEL TERMINAL NUMBERS. FOR IDENTIFICATION PURPOSES, WIRING MUST GO TO AND FROM EACH DEVICE, BRANCH CIRCUITS (TAPS) ARE NOT PERMITTED, POLARITY TO BE OBSERVED THROUGHOUT.
  - (B) ALL CIRCUITS SHALL RUN CONTINUOUS BETWEEN DEVICES, WITHOUT SPICES WHERE EVER PRACTICAL, WHERE A CONTINUOUS WIRE RUN IS NOT POSSIBLE, CONNECTIONS SHALL BE MADE IN AN IDENTIFIED LISTED ELECTRICAL BOX UTILIZING TERMINAL BLOCKS. THE USE OF WIRE NUTS IS NOT PERMITTED.
  - (C) ALL WIRING TO BE IN ACCORDANCE WITH THE NFPA 70:2014 & NFPA 7205 STANDARDS.

**SCOPE OF WORK:**

- INSTALL NEW NOTIFIER NFS-320 ADDRESSABLE FIRE ALARM CONTROL PANEL.
- PROVIDE AND INSTALL NEW DETECTION AND NOTIFICATION APPLIANCES IN EACH RESIDENTIAL UNIT AND COMMON AREAS.
- MONITOR EXISTING WATER FLOW SWITCHES, TAMPER SWITCHES, & POST INDICATING VALVE.
- MONITOR NEW PRESSURE SWITCHES AND TAMPER SWITCHES FOR NEW DRY SPRINKLER SYSTEMS.
- PROVIDE AND INSTALL MONITORED LOW TEMPERATURE SWITCH IN GARAGE SPACE.
- RESIDENCE APARTMENTS ARE EQUIPPED WITH ELECTRIC KITCHENS ONLY. NO GO PRODUCING EQUIPMENT IS LOCATED WITHIN THE BUILDING.
- PROVIDE AND INSTALL HEAT DETECTION IN THE ATTIC.
- CONTRACTOR IS REQUIRED TO SUBMIT THREE (3) SETS OF SIGNED AND SEALED FIRE ALARM DRAWINGS AND CALCULATIONS. THESE DOCUMENTS SHALL INCLUDE BATTERY AND VOLTAGE DROP CALCULATIONS AND MANUFACTURER'S DEVICES AND COMPONENTS WHICH WILL BE INSTALLED ON THIS PROJECT. SUBMITTAL IS TO BE REVIEWED AND APPROVED BY DESIGNER OF RECORD, AS PER N.J.A.C. 5:25-2.9(b)(1)(ii), N.J.A.C. 5:25-2.9(b), & N.J. 2009 BC 10132

USE THIS MATRIX TO DETERMINE THE CONTROL PANEL'S ACTION WHEN AN ALARM CONDITION EXISTS (LISTED BELOW)

SYSTEM CONDITION	CONTROL PANEL ACTION			
	SEND SIGNAL TO CONTROL PANEL FROM BY	REMOVE WIRING FROM SYSTEM & SERVICES THROUGHOUT THE BUILDING	SEND ALARM SIGNAL TO COMMON PUBLIC SAFETY OFFICE	SEND TRIGGER SIGNAL TO COMMON PUBLIC SAFETY OFFICE
AREA SMOKE DETECTOR	X	X	X	X
BEDROOM SMOKE DETECTOR	X	X	X	X
MANUAL PULL STATION	X	X	X	X
HEAT DETECTOR	X	X	X	X
WATERFLOW SWITCH	X	X	X	X
PRESSURE SWITCH	X	X	X	X
LOW TEMPERATURE SWITCH	X	X	X	X
TAMPER SWITCH	X	X	X	X
POST INDICATOR VALVE TAMPER	X	X	X	X
FIELD WIRING OR SYSTEM COMPONENT FAILURE	X	X	X	X
LOSS OF PRIMARY AC POWER	X	X	X	X

**FIRE ALARM SYSTEM FUNCTION MATRIX**

**Revisions**

Date	Issue	Description
03-06-15	1	ISSUED FOR DCA FILING
03-18-15	2	ISSUED FOR BIDDING

**Consultants**

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 Drawn By HD Checked By gg

Dwg. Title  
**FIRE ALARM NOTES, RISER DIAGRAM,  
 SCHEDULE & SYSTEM SEQUENCE OF  
 OPERATION MATRIX**

Work Order No. \_\_\_\_\_ Dwg. No. \_\_\_\_\_  
**4698C E402**