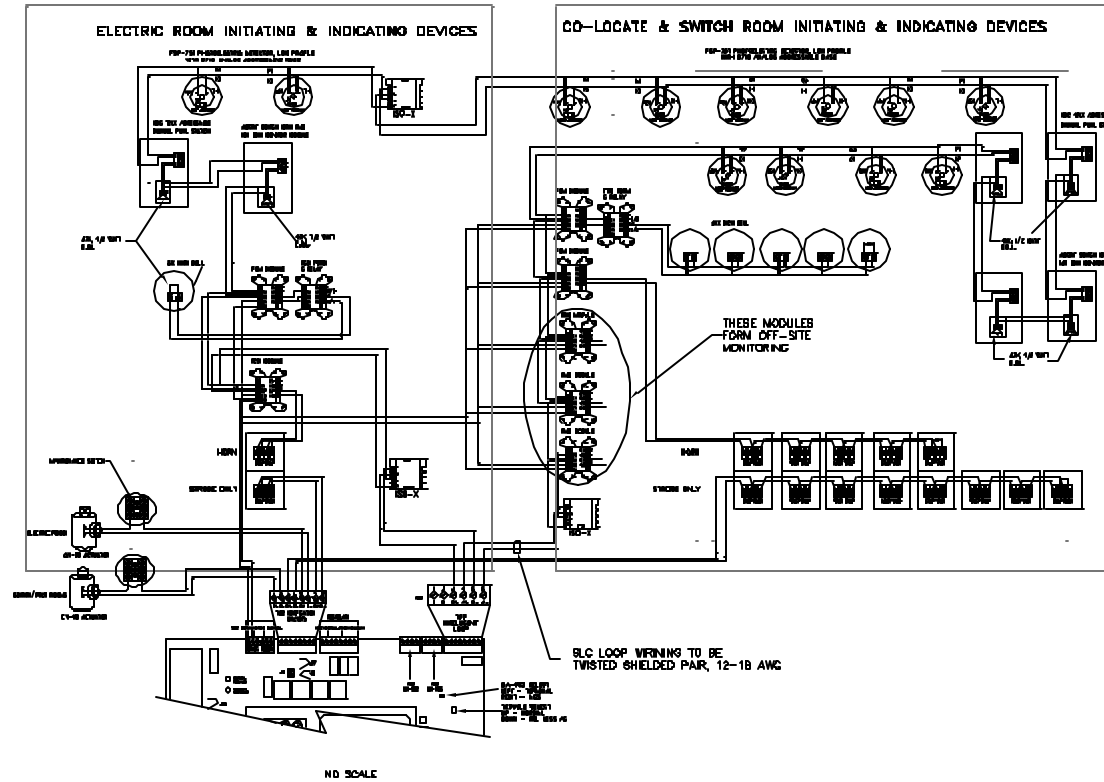
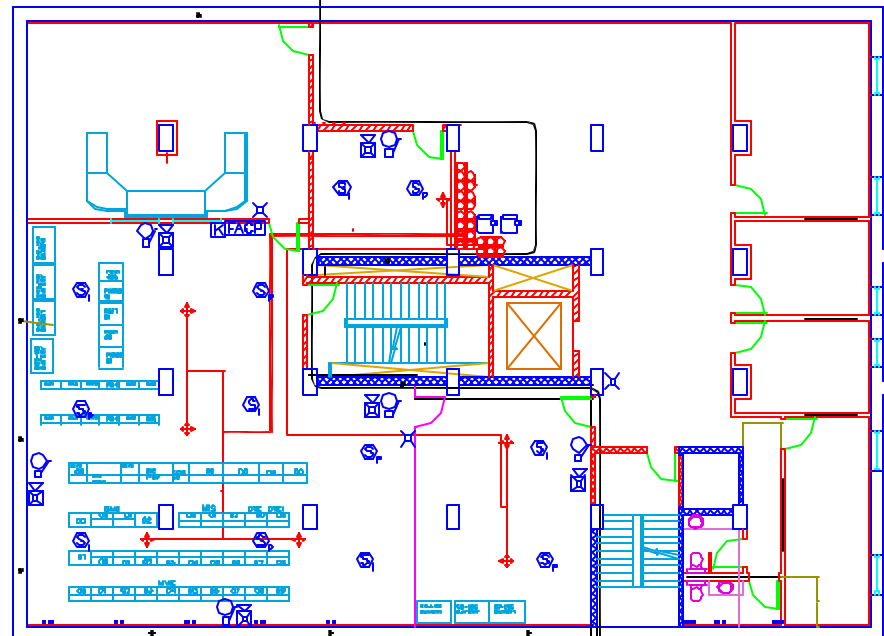
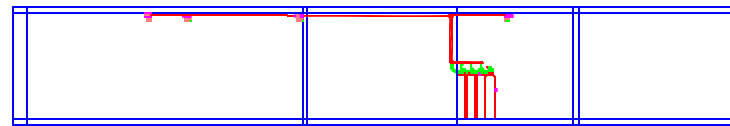


### AUTOPULSE IQ-301 SLC INTELLIGENT LOOP WIRING PLAN

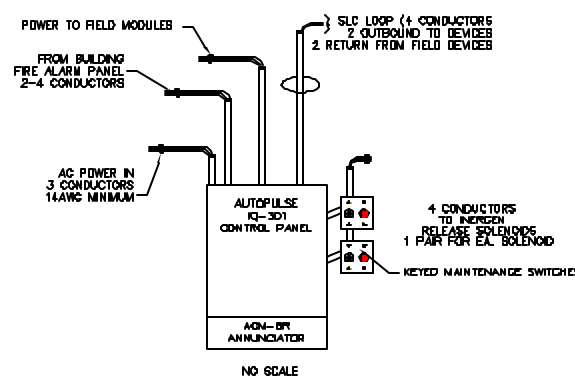


AUTOPULSE IQ-301 PANEL  
MEETS NFPA 72 (1996) STYLE 4 REQUIREMENTS



- LEGEND**
- FS-761 IONIZATION DETECTOR
  - FSP-791 PHOTOELECTRIC DETECTOR
  - NBB-12LX ADDRESSABLE MANUAL RELEASE
  - SUPPRESSION ABORT STATION
  - 6" BELL - FIRST STAGE ALARM
  - HORN/STROBE - SECOND STAGE ALARM
  - STROBE - SECOND STAGE ALARM
  - KEYED MAINTENANCE SWITCH
  - INERGEN DV-96 CYLINDER VALVE ACTUATOR
  - IQ-301 ANALOG/ADDRESSABLE CONTROL PANEL

### AUTOPULSE IQ-301 CONDUIT RUNS



### SEQUENCE OF EVENTS

	TRIPLE BELL	TRIPLE BELL	TRIPLE BELL	TRIPLE BELL	TRIPLE BELL	TRIPLE BELL	TRIPLE BELL	TRIPLE BELL	TRIPLE BELL
FIRST DETECTOR	X	X	X	X	X	X	X	X	X
SECOND DETECTOR	X	X	X	X	X	X	X	X	X
TRIP BY TIME DELAY	X	X	X	X	X	X	X	X	X
MANUAL PULL STATION	X	X	X	X	X	X	X	X	X
TROUBLE CONDITION	X	X	X	X	X	X	X	X	X

### SLC WIRING SPECIFICATIONS:

- THE TOTAL LENGTH OF ALL WIRES IN ALL BRANCHES OF THE SLC LOOP SHALL NOT EXCEED 1400 FEET (426 M). TOTAL AC RESISTANCE FROM THE PANEL TO THE END OF ANY BRANCH LINE CANNOT EXCEED 40 OHMS.
- ALL WIRING CIRCUIT DERIVATIONS SHALL BE 2-WIRE, NFPA & ALL INDICATING CIRCUIT DERIVATIONS SHALL BE 2-WIRE, NFPA STYLE 1.
- WIRING TO INTELLIGENT AND ADDRESSABLE MODULES SHALL BE TWISTED, SHIELDED PAIR 12 TO 18 AWG, UNSHIELDED, UNTWISTED WIRE MAY BE USED FOR WIRE RUNS UP TO 1000 FEET.
- SHIELD DRAIN PINE OR FOL MUST NOT ENTER THE AUTOPULSE CONTROL ROOM TO REACTIVE ONE OF THE LOOP. SHIELD DRAIN MUST ALSO BE CONNECTED AT POINTS TERMINATIONS.
- WIRING TO MAN MANIPULABLE, MANUAL PULL STATIONS AND ABORT STATIONS SHALL BE 12 TO 18 AWG, MAXIMUM LOOP RESISTANCE NOT TO EXCEED 30 OHMS.
- WIRING TO ALL INDICATING DEVICES SHALL BE 12 TO 18 AWG, MAXIMUM LOAD ON EACH INDICATING APPLIANCE CIRCUIT IS 2.5 AMPS, TOTAL CURRENT DRAW FROM ALL INDICATING APPLIANCE CIRCUITS AS WELL AS DC POWER OUTPUT SHALL NOT EXCEED 1 AMP.
- RESEARCH AND CONTROL SYSTEM INSTALLATION FOR SHIELD CONDUIT TO NFPA STANDARD 72, 2001 AND 72.17 SHALL ALSO COMPLY TO MANUFACTURER'S SPECIFICATION AS SET FORTH IN INERGEN P-9100 INSTALLATION, OPERATION AND MAINTENANCE MANUAL, AUTOPULSE IQ-301 ANALOG ADDRESSABLE ALARM/RELEASE CONTROL SYSTEM.

### DEVICE NOTES:

- FIELD MONITOR MODULE, CONTROL MODULE AND ADDRESSABLE DEVICE SHALL HAVE A UNIQUE ADDRESS. THE ADDRESS OF EACH DEVICE IS SET BY A ROTARY SWITCH WHICH IS INTERNAL TO THE DEVICE.
- SMOKE DETECTORS SHALL HAVE A STAGING LED.
- ALL SMOKE DETECTORS SHALL BE CROSS ZONED AND "MAPPED" TO INERGEN RELEASE ZONE.
- ABORT STATIONS SHALL BE PROGRAMMED AS STANDARD 11 TYPE RELAY TIMES.
- FLUSH AND HOLD ALARM SYSTEMS, DOWNDOWN WILL EXPIRE AT 10 SECONDS.
- RELEASE OF ABORT STATION SWITCH, DOWNDOWN WILL EXPIRE AT 10 SECONDS.
- OPERATION OF ANY MANUAL PULL STATION WILL CAUSE INSTANTANEOUS DISCHARGE OF INERGEN INTO THE PROTECTED AREA.
- ALL DEVICES SHALL BE UL LISTED AND APPROVED.

### AUTOPULSE IQ-301 NOTES:

- REQUIRE NFPA CODES 708 AND 708.1 FOR 20 AMP.
- SEE BELL CIRCUITS IN PLAN.
- WIRING TO ALL DEVICES IS NFPA STYLE 0 (2 CONDUCTORS).
- BACK-UP BATTERIES RATED @ 7 AH, 24 VDC.
- SUPPLEMENTARY CONTROL SYSTEMS FOR 20 AMP @ 30 VDC (RESISTIVE).
- ALARM AND TROUBLE CONTACTS ARE FORM-4, 1/2" WIDE 22 AMP @ 30 VDC (RESISTIVE).

### FIRE DETECTION & CONTROL NOTES:

- INTERSTATE FIRE PROTECTION SHALL FURNISH AND INSTALL ALL MATERIALS, LABOR AND SERVICES REQUIRED TO INSTALL A COMPLETE FIRE SUPPRESSION SYSTEM TO THE OWNERS SPECIFICATION AS WELL AS ALL APPLICABLE FIRE PREVENTION CODES.
- THE FIRE SUPPRESSION INSTALLATION SHALL BE MADE IN COMPLIANCE WITH NFPA 30B, CLEAN - AGENT FIRE EXTINGUISHING SYSTEMS FROM EXTERIOR. THE FIRE DETECTION INSTALLATION SHALL BE MADE IN COMPLIANCE WITH NFPA 72, NATIONAL FIRE ALARM CODE (2001 EDITION), AND SHALL BE IN COMPLIANCE WITH ALL APPLICABLE CODES.
- THE INERGEN SYSTEM SHALL BE CONTROLLED BY AN ANSUL AUTOPULSE IQ-301 CONTROL PANEL. THIS PANEL IS AN INTELLECTUAL ADDRESSABLE CONTROL PANEL. THIS PANEL WILL BE REFERRED TO AS THE "FAZP".
- THE FAZP SHALL BE INSTALLED IN THE MAIN SWITCH ROOM AND SHALL BE ACCESSIBLE.
- THE ELECTRICAL CONTROLLER SHALL PROVIDE A DEGRADED CIRCUIT, WITH A LOCKING BREAKER. THE FAZP SHALL HAVE BATTERY BACK-UP SUFFICIENT TO OPERATE THE FAZP FOR A MINIMUM OF 24 HOURS IN STAND BY MODE AND THE LIMITED IN ALARM MODE.
- THE FAZP SHALL COMMUNICATE ALARM AND TROUBLE CONDITIONS TO THE EXISTING BUILDING FIRE ALARM SYSTEM IF REQUIRED BY LOCAL AUTHORITY.
- THE FAZP SHALL ACCEPT INPUTS FROM THE FOLLOWING DEVICES:
  - (1) MANUAL PULL STATIONS
  - (2) SMOKE DETECTORS
  - (3) SUPPRESSION ABORT STATIONS
  - (4) THE FAZP SHALL BE PROGRAMMED AS FOLLOWS:
    - (A) UPON RECEIPT OF AN ALARM FROM A SINGLE SMOKE DETECTOR:
      - (i) INITIATE A DOUBLE BELL
      - (ii) INITIATE A BELL TO THE BUILDING FIRE ALARM SYSTEM
    - (B) UPON RECEIPT OF AN ALARM FROM A SECOND SMOKE DETECTOR:
      - (i) INITIATE A SECOND STROBE WITH THE BUILDING FIRE ALARM SYSTEM
      - (ii) INITIATE A 30 SECOND COUNTDOWN RELEASE INERGEN
      - (iii) SHUT DOWN HVAC EQUIPMENT AND CLOSE FRESH AIR DAMPERS
    - (C) UPON RECEIPT OF A SIGNAL FROM A SINGLE MANUAL RELEASE STATION:
      - (i) IMMEDIATELY RELEASE INERGEN
      - (ii) INITIATE ONE TWO ALARMS (HORN/STROBES AND STROBES)
      - (iii) INITIATE A BELL TO THE BUILDING FIRE ALARM SYSTEM
      - (iv) SHUT DOWN HVAC EQUIPMENT AND CLOSE FRESH AIR DAMPERS
  - (5) INTERSTATE FIRE PROTECTION SHALL FURNISH A ONE YEAR WARRANTY ON ALL PARTS AND LABOR, AND SHALL RELY TO THE MANUFACTURER'S WARRANTY ON ANY OTHER PARTS.
  - (6) INTERSTATE FIRE PROTECTION SHALL PROVIDE TRAINING IN THE OPERATION OF THE INERGEN FIRE SUPPRESSION SYSTEM.
  - (7) INTERSTATE FIRE PROTECTION SHALL PROVIDE "AS BUILT" DRAWINGS OF THE INERGEN FIRE SUPPRESSION SYSTEM.

System Information:  
INERGEN FIRE  
SUPPRESSION SYSTEM  
COLO, ELECTRIC ROOM  
AND SWITCH ROOMS

Client:  
LIGHTSHIP TELECOM  
340 CUMBERLAND AVE.  
SECOND FLOOR  
PORTLAND, ME.

**Interstate**  
FIRE PROTECTION  
PO BOX 1005  
N. CONWAY, NH 03860  
57 CONY STREET  
AUGUSTA, ME. 04330

LIGHTSHIP TELECOM  
ELECTRICAL LAYOUT

Drawn	04/08/01
Checked	
Reviewed	
Approved	
Project Lead	T. MOONEY
Designer	BOB MARINE

SHEET :  
A-1