# FIRE ALARM LEGEND

FACP FIRE ALARM CONTROL PANEL ADDRESSABLE

- COORDINATE WITH FIRE DEPARTMENT -

RMB DIGITIZE RADIO BOX

DACT

MANUAL PULL STATION ADDRESSABLE HEATED AREAS
CONVENTIONAL WITH MONITOR MODULE FOR PARKING GARAGE

ADDRESSABLE SMOKE DETECTOR

DUAL LINE U.L. DIGITAL DIALER

CONVENTIONAL FIXED TEMPERATURE THERMAL DETECTOR

CM ADDRESSABLE CONTROL MODULE

ADDRESSABLE MONITOR MODULE

DUAL ADDRESSABLE MONITOR MODULE

MULTI-CANDELA HORN/STROBE

MULTI-CANDELA STROBE

FS SPRINKLER SYSTEM WATER FLOW SWITCH

TS SPRINKLER SYSTEM TAMPER SWITCH

SPRINKLER SYSTEM LOW PRESSURE SWITCH

RED BEACON STROBE WEATHERPROOF

KNOX BOX PER FIRE DEPARTMENT

### FIRE ALARM NARRATIVE

- 1. NFPA 72 THE MAINE FIRE ALARM AND LOCAL STANDARDS HAVE BASED THE DESIGN OF THE FIRE ALARM SYSTEM ON ENGINEERING CRITERIA AS DEFINED.
- THE SYSTEM IS DESIGNED TO PROTECT A NEW 8 STORY MIXED USE STRUCTURE. LEVEL ONE (GROUND FLOOR) RETAIL/RESTAURANT AREA. 6 STORIES ABOVE SHALL BE OPEN PARKING GARAGE.
- 3. THE FIRE ALARM SYSTEM IS ADDRESSABLE WITH 60 HOUR BATTERY BACKUP AND DESIGNED TO PROTECT THE ENTIRE BUILDING.
- 4. THE ENTIRE BUILDING SHALL BE EQUIPPED WITH A FIRE PROTECTIVE SIGNALING SYSTEM IN ALL AREAS. A FIRE SUPPRESSION WET PIPE SYSTEM WILL BE INSTALLED FOR THE FIRST LEVEL RETAIL/RESTAURANT FIT UP BIKE SHOP AND GARAGE OFFICE.
- 5. DOUBLE ACTION MANUAL PULL STATIONS SHALL BE LOCATED WITHIN 5 FEET OF EACH MEANS EGRESS AND AT EACH STAIR TOWER ON EACH FLOOR. PULL AT 44 INCHES ABOVE THE FINISHED FLOOR TO THE ACTIVATING LEVEL OF THE BOX. THE PULL STATION SHALL MECHANICALLY LATCH UPON OPERATION AND REMAIN SO UNTIL RESET BY A KEY COMMON TO ALL SYSTEM LOCKS. 5 POUND MAXIMUM PULL FORCE TO ACTUATE THE PULL STATION.
- 6. TEMPORARY ADDRESSABLE PULL STATIONS WILL BE LOCATED ON THE LOWER LEVEL (FUTURE RETAIL/RESTAURANT). THE 8 LANDING OF EACH PARKING GARAGE STAIR TOWER WILL HAVE A DOUBLE ACTION MANUAL PULL STATION THAT IS CONVENTIONAL TYPE, WET LOCATION. THIS IS AN OPEN GARAGE AND STAIR TOWER. THIS AREA DOES NOT HAVE HEAT AND EXPOSED TO WEATHER. MONITOR MODULES WILL BE LOCATED IN THE ELEVATOR MACHINE ROOM OR WATER ROOM (HEATED) CONNECTED TO EACH STATION FOR MONITORING.
- 7. THE PARKING GARAGE HAS A ELEVATOR IN EACH STAIR TOWER (TWO). BECAUSE THE LOBBIES ARE EXPOSED TO THE WEATHER DAMP LOCATION FIXED TEMPERATURE HEAT DETECTORS SHALL BE INSTALLED IN FRONT OF EACH ELEVATOR DOOR. EACH DETECTOR SHALL CONNECT TO A MONITOR MODULE IN THE ELEVATOR MACHINE ROOM (HEATED).
- 8. EACH ELEVATOR MACHINE ROOM SHALL HAVE 4 CONTROL MODULES TO PUT ELEVATOR IN FIRE ALARM MODE AND TO GIVE INFORMATION WHICH LOBBY HAS A FIRE FOR ELEVATOR RECALL.
- 9. THE AUDIBLE/VISIBLE NOTIFICATION APPLIANCES ARE LOCATED IN REQUIRED AREAS; THE DEVICES SHALL MEET THE REQUIREMENTS OF ADA. THE AUDIBLE APPLIANCES SHALL HAVE A SOUND LEVEL AT 15 DBA MEASURED 5 FEET ABOVE THE FINISHED FLOOR. VISIBLE NOTIFICATION APPLIANCES ARE LOCATED IN TOILET ROOM. ALL AUDIBLE/VISUAL NOTIFICATION APPLIANCES SHALL BE MOUNTED 80 INCHES ABOVE THE FINISH FLOOR TO THE BOTTOM OF THE DEVICES.
- 10. ALL AUDIBLE/VISUAL DEVICES IN THE OPEN GARAGE SHALL BE DAMP LOCATION AND CAN OPERATE AT -20 DEGREES F. THE DEVICES ON THE ROOF SHALL BE WET LOCATION LISTED.
- 11. TEMPORARY ADJUSTABLE AUDIBLE/VISUAL DEVICES SHALL BE LOCATED IN THE FIRST LEVEL SPACE
- 12. THE SPRINKLER TAMPER SWITCHES SHALL BE CONNECTED TO THE FIRE ALARM CONTROL PANEL VIA AN ADDRESSABLE MONITOR MODULE AND PROGRAMMED FOR SUPERVISED TROUBLE SIGNAL. THE SPRINKLER FLOW SWITCH SHALL BE CONNECTED TO THE FIRE ALARM CONTROL PANEL VIA AN ADDRESSABLE MONITOR MODULE AND PROGRAMMED FOR ALARM.
- 13. EACH FIRE ALARM ACTUATING DEVICE WILL HAVE AN ADDRESS AND SHALL BE LABELED TO MATCH. CONVENTIONAL DEVICES SHALL HAVE ADDRESSABLE MONITOR MODULES AND END OF
- 14. THE ACTIVATION OF ANY SPRINKLER VALVE TAMPER SWITCH SHALL ACTIVATE THE SYSTEM SUPERVISORY AND SOUND AN AUDIBLE SIGNAL AND ILLUMINATE THE LED AT THE CONTROL PANEL AND ANNUNCIATOR. DIFFERENTIATIONS BETWEEN VALVES TAMPER ACTIVATION AND OPENS AND OR GROUNDS ON INITIATING CIRCUIT SHALL BE PROVIDED. ACTIVATING THE "ACKNOWLEDGE SWITCH" WILL SILENCE THE SUPERVISORY AUDIBLE SIGNAL WHILE MAINTAINING THE SUPERVISORY LED ON THE CONTROL PANEL AND ANNUNCIATOR UNTIL THE TAMPER IS RESTORED TO NORMAL AND THE PANEL THEN RESET.
- B. FIRE PROTECTIVE SIGNALING SYSTEM CONTROL EQUIPMENT
- 1. THE FIRE ALARM CONTROL PANEL SHALL BE AN ADDRESSABLE SYSTEM WITH COMPATIBLE ADDRESSABLE DEVICES. EACH ADDRESSABLE DEVICE WILL PROVIDE ITS OWN UNIQUE IDENTIFICATION AND LOCATION DESCRIPTION AT THE FIRE ALARM CONTROL PANEL UPON INITIATION OF THE SUBJECT DEVICE. AN AES 8 ZONE RADIO TRANSMITTER, AND A UDACT TO A CENTRAL STATION TO MONITOR TROUBLE/SUPERVISORY CONDITIONS AND A KNOX BOX WITH MASTER KEYS SHALL BE LOCATED OUTSIDE THE VESTIBULE AND A STROBE LIGHT SHALL BE LOCATED ON THE BUILDING.
- 2. THE INCOMING POWER TO THE SYSTEM SHALL BE SUPERVISED SO THAT ANY POWER FAILURE SHALL BE AUDIBLY AND VISUALLY INDICATED AT THE CONTROL PANEL. A GREEN POWER ON LED SHALL BE DISPLAYED CONTINUOUSLY WHILE INCOMING POWER IS PRESENT. THE ALARM ACTIVATION OF ANY INITIATION CIRCUIT SHALL NOT PREVENT THE SUBSEQUENT ALARM OPERATION OF ANY OTHER INITIATION CIRCUIT OR DEVICE. THERE SHALL BE INDEPENDENTLY SUPERVISED INDICATING APPLIANCE CIRCUITS FOR ALARM HORNS AND FLASHING ALARM LAMPS. DISARRANGEMENT CONDITIONS OF ANY CIRCUIT SHALL NOT AFFECT THE OPERATION OF THE OTHER CIRCUITS. THE SYSTEM SHALL HAVE PROVISIONS FOR DISABLING AND ENABLING ALL DEVICES INDIVIDUALLY FOR MAINTENANCE OR TESTING PURPOSES.
- 3. THE DIGITAL ALARM COMMUNICATOR TRANSMITTER (DACT) SHALL BE SUPERVISED, MONITOR DUAL PHONE LINES (ONE SOLO THE OTHER CAN BE WITH THE ELEVATOR) THE DACT SHALL TRANSMIT PANEL STATUS TO UL LISTED CENTRAL STATION RECEIVER VIA TELEPHONE LEASE LINES.
- 4. BATTERIES AND POWER SUPPLY SHALL BE SIZED TO HANDLE AN ADDITIONAL 30 AUDIO/VISUAL DEVICES ON THE GROUND FLOOR RETAIL AREA.
- C. SEQUENCE OF OPERATION
- 1. UNDER NORMAL CONDITION THE FRONT OF THE CONTROL PANEL SHALL DISPLAY A "SYSTEM NORMAL"MESSAGE AND THE CURRENT TIME AND DATE. SHOULD AN ABNORMAL CONDITION BE DETECTED THE APPROPRIATE LED (ALARM, SUPERVISORY OR TROUBLE) SHALL BE DISPLAYED ON THE PANEL ANNUNCIATOR LOCATED ON THE FRONT OF THE PANEL AND REMOTE ANNUNCIATOR LOCATED OUTSIDE AT THE BUILDING ENTRANCE. THE PANEL AUDIBLE SIGNAL SHALL PULSE FOR ALARM CONDITIONS AND SOUND STEADILY FOR TROUBLE AND SUPERVISORY CONDITIONS.
- 2. THE PANEL SHALL DISPLAY THE FOLLOWING INFORMATION RELATIVE TO THE ABNORMAL CONDITION OF A POINT IN THE SYSTEM:
  - A. CUSTOM LOCATION LABEL
  - B. TYPE OF DEVICE (SMOKE, PULL STATION, WATER FLOW, TAMPER)C. POINT STATUS (ALARM, TROUBLE, SUPERVISORY)
  - C. POINT STATUS (ALARM, TROUBLE, SUPERVISORY)
    D. TIMESTAMP
- 3. THESE CHARACTERISTICS, RELATIVE TO AN ABNORMAL CONDITION OF A POINT, SHALL BE DISPLAYED SIMULTANEOUSLY ON A BACKLIGHTED 60\_ CHARACTER ALPHANUMERIC LCD DISPLAY. PRESSING THE ACKNOWLEDGE BUTTON SHALL ACKNOWLEDGE THE ALARM OR TROUBLE CONDITION. AFTER THE POINTS HAVE BEEN ACKNOWLEDGED, THE LED'S SHALL GLOW STEADY AND THE PANEL AUDIBLE SIGNAL SHALL BE SILENCED. THE ALARMS, TROUBLES AND, SUPERVISORY CONDITIONS SHALL BE DISPLAYED CHRONOLOGICALLY.
- 4. SHOULD THE "ALARM SILENCE" BUTTON BE PRESSED ALL ALARM SIGNALS SHALL CEASE OPERATION AND STROBES SHALL CONTINUE TO PULSE. THE SYSTEM "RESET" BUTTON SHALL RETURN THE SYSTEM TO NORMAL OPERATION AND CEASE THE STROBE PULSING.
- 5. SHOULD AN ALARM CONDITION CONTINUE TO EXIST DUE TO A FAULTY DETECTOR, THE SYSTEM SHALL BE ABLE TO BE RESET WITH THE DETECTOR REMOVED OR PUT INTO DISABLE MODE.
- 6. THE SYSTEM ALARM OPERATION SUBSEQUENT TO THE ALARM ACTIVATION OF ANY INITIATING DEVICE IS TO BE AS FOLLOWS:
- A. ALL AUDIBLE INDICATION APPLIANCES SHALL SOUND A SYNCHRONIZED THREE PULSE TEMPORAL

PATTERN UNTIL SILENCED BY THE ALARM SILENCE BUTTON LOCATED AT THE CONTROL PANEL.

- B. ALL VISUAL ALARM INDICATING APPLIANCES SHALL DISPLAY A CONTINUOUS PATTERN UNTIL SYSTEM IS RESET.
- C. SEND SIGNAL TO ELEVATOR CONTROLLERS INDICATING A FIRE CONDITION.

SIGNAL THE ELEVATOR CONTROLLER LEVELS THE ELEVATOR LOBBY HEAT DETECTOR(S) ARE ACTIVATED

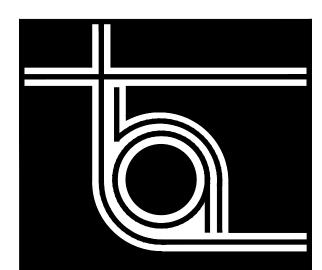
- 7. THE ACTIVATION OF ANY SPRINKLER VALVE TAMPER SWITCH SHALL ACTIVATE THE SYSTEM SUPERVISORY AND SOUND AN AUDIBLE SIGNAL AND ILLUMINATE THE LED AT THE CONTROL PANEL AND ANNUNCIATOR. DIFFERENTIATIONS BETWEEN VALVES TAMPER ACTIVATION AND OPENS AND OR GROUNDS ON INITIATING CIRCUIT SHALL BE PROVIDED. ACTIVATING THE "ACKNOWLEDGE SWITCH" WILL SILENCE THE SUPERVISORY AUDIBLE SIGNAL WHILE MAINTAINING THE SUPERVISORY LED ON THE CONTROL PANEL AND ANNUNCIATOR UNTIL THE TAMPER IS RESTORED TO NORMAL AND THE PANEL THEN RESET.
- 8. UPON ACTIVATION OF ANY PULL STATION, AUTOMATIC ACTIVATION OF ANY THERMAL HEAT DETECTOR, PHOTO ELECTRIC SMOKE DETECTOR, OR SPRINKLER FLOW SWITCH SHALL CAUSE ALL STROBES TO FLASH, AT (120) FLASHES PER MINUTE, AND ALL AUDIO SIGNAL DEVICES TO SOUND IN THE BUILDING, AND SEND A SIGNAL TO THE AUTOMATIC FIRE ALARM CONTROL PANEL. IF ALARM SIGNALS ARE SILENCED FOR ANY REASON THEY SHALL AUTOMATICALLY RESOUND IF ANOTHER ALARM ZONE IS TRIPPED. IN THE EVENT OF A COMMERCIAL POWER INTERRUPTION THE SYSTEM SHALL AUTOMATICALLY TRANSFER TO THE EMERGENCY STANDBY BATTERY SOURCE.
- 9. AN ALARM SIGNAL SHALL BE SENT TO THE PORTLAND, ME FIRE DEPARTMENT VIA THE RADIO TRANSMITTER.

#### END OF NARRATIVE

#### FIRE ALARM TEST CRITERIA

- . TESTING
- 2. THE SYSTEM WILL BE TESTED IN IT'S ENTIRETY PRIOR TO OCCUPANCY BY A PORTLAND MAINE LICENSED CONTRACTOR. ALL TESTING WILL BE IN ACCORDANCE WITH NFPA 72 STANDARDS AND A DETAILED REPORT WILL BE ISSUED TO THE PORTLAND ME FIRE DEPARTMENT PRIOR TO THEIR FINAL INSPECTION. A SET OF AS\_ BUILT DRAWINGS WILL BE PROVIDED TO THE OWNER AND LOCAL AUTHORITIES AS REQUIRED. THE PORTLAND ME FIRE DEPARTMENT SHALL DIRECT AND WITNESS THE TEST FOR ACCEPTANCE AS MAY BE REQUIRED.
- E. MANUFACTURERS
- 1. THE FIRE ALARM SYSTEM SHALL BE AS MANUFACTURED BY FIRE-LITE, OR EQUAL.
- F. SHOP DRAWINGS
- 1. THE CONTRACTOR SHALL FURNISH TO THE ENGINEER (5) SETS OF SHOP DRAWINGS FOR APPROVAL. SHOP DRAWINGS SHALL INCLUDE A RISER DIAGRAM.
- 2. OBTAIN AND PAY FOR ALL REQUIRED TEST, PERMITS, AND INSPECTIONS. SUBMIT PLANS TO THE PORTLAND ME FIRE DEPARTMENT FOR APPROVAL.

END OF TEST CRITERIA



## THA ARCHITECTS, LL (

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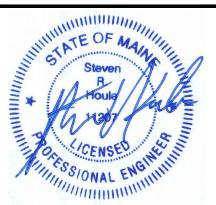
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midtown Portland

Somerset Street Elm Street Portland, ME

Building 2 Fire Alarm Specifiactions and Legend

Structural Engineer

Becker Engineering

MEP ENGINEER

McCabe Associates
FP Engineer
McCabe Associates

SCALE: 1/16"=1'-0"

ISSUED / DRAWN BY

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