



BASEMENT FIRE ALARM PLAN
SCALE: 1/8"=1'-0"

OPERATIONS MATRIX	FIRE ALARM OUTPUT	ACTIVATE ALARM INDICATOR	ACTIVATE AUDIBLE ALARM	ACTIVATE SUPERVISORY INDICATOR	ACTIVATE AUDIBLE SUPERVISORY SIGNAL	ACTIVATE TROUBLE INDICATOR	ACTIVATE AUDIBLE TROUBLE INDICATOR	ACTIVATE ALARM SIGNAL	TRANSMIT SUPERVISORY SIGNAL	TRANSMIT TROUBLE SIGNAL	ACTIVATE ALTERNATE ELEVATOR RECALL	ACTIVATE PRIMARY RECALL
FIRE ALARM INPUT	●											
SMOKE DETECTORS	●											
DUCT DETECTORS	●											
PULL STATIONS	●											
ALTERNATE RECALL FLR, ELEV LOBBY SMOKE DET	●											
ELEVATOR EQUIPMENT ROOM SMOKE DET	●											
WATERFLOW SWITCHES	●											
VALVE TAMPER SWITCHES	●											
FIRE ALARM AC POWER FAIL	●											
FIRE ALARM LOW BATTERY	●											
OPEN CIRCUIT	●											
GROUND FAULT	●											
NAC SHORT CIRCUIT	●											
LOSS OF AC TO BUILDING	●											

SHEET NOTES:

- ① ADDRESSABLE MONITOR MODULE(S), PROVIDED TO MONITOR ALL WATER FLOW, PRESSURE SWITCHES, TAMPER SWITCHES AND POST INDICATING VALVES ASSOCIATED WITH THE FIRE SPRINKLER SYSTEM. INSTALLING CONTRACTOR SHALL FIELD VERIFY EXACT MOUNTING, CIRCUITING AND PROGRAMMING REQUIREMENTS. FIELD VERIFY EXACT QUANTITY AND LOCATION(S).
- ② ADDRESSABLE RELAY MODULES (4) PROVIDED FOR THE ELEVATOR RECALL AND SHUT DOWN. TIE TO ELEVATOR EQUIPMENT ROOM DETECTOR(S), HOISTWAY DETECTOR(S) AND LOBBY DETECTOR(S) TO INITIATE RECALL AND SHUT DOWN. ADDRESSABLE MONITOR MODULE PROVIDED TO MONITOR THE CONTROL CIRCUIT TO THE ELEVATOR SHUNT TRIP BREAKER FOR THE PRESENCE OF OPERATING VOLTAGE. LOSS OF VOLTAGE SHALL CAUSE A SUPERVISORY SIGNAL AT THE CONTROL PANEL. FIELD VERIFY EXACT MOUNTING, CIRCUITING AND PROGRAMMING REQUIREMENTS.

FCP Battery Calculation 5/16/2014
PROJECT NAME: 27 PEARL STREET BUILDING
Required Standby Time: 24 Hours
Required Alarm Time: 5 Minutes

Regulated Load in Standby			
Device Type	Number of Devices	Current (Amps)	Total Current (Amps)
MS-9200UDLS Main Circuit Board	1	0.145000	0.145000
SD355 Smoke Detectors	8	0.000300	0.002400
D355RPL Duct Detectors	2	0.000300	0.000600
WMP-500 Monitor Modules	3	0.000400	0.001200
WMP-500 Relay Module	1	0.000300	0.000300
B6-12LX Pull Stations	11	0.000300	0.003300
TOTAL STANDBY LOAD = 0.15412			
Regulated Load in ALARM			
Device Type	Number of Devices	Current (Amps)	Total Current (Amps)
MS-9200UDLS Main Circuit Board	1	0.275000	0.275000
Max. Alarm Draw - All Addressable Devices	1	0.400000	0.400000
NAC-1 (See voltage drop calcs for device quantity)	1	0.859000	0.859000
NAC-2	1	1.125000	1.125000
TOTAL ALARM LOAD = 2.659000			
Battery Requirements			
Standby Load	0.15412	X	24.000000 = 3.698888
Alarm Load	2.659000	X	0.083333 = 0.221588
Total Ampere Hours (before derating factor)			3.920476
Derating Factor			X = 1.2
TOTAL AMPERE HOURS REQUIRED = 4.70456			
BATTERIES TO BE PROVIDED (2 - 12v) 7 AH			

FPS1 Battery Calculation 5/16/2014
PROJECT NAME: 27 PEARL STREET BUILDING
Required Standby Time: 24 Hours
Required Alarm Time: 5 Minutes

Regulated Load in Standby			
Device Type	Number of Devices	Current (Amps)	Total Current (Amps)
Altronix AL802ULADA	1	0.090000	0.090000
TOTAL STANDBY LOAD = 0.090000			
Regulated Load in ALARM			
Device Type	Number of Devices	Current (Amps)	Total Current (Amps)
Altronix AL802ULADA	1	0.175000	0.175000
FPS1-1 (See voltage drop calcs for device quantity)	1	1.050000	1.050000
FPS1-2	1	0.797000	0.797000
FPS1-3	1	0.678000	0.678000
FPS1-4	1	0.730000	0.730000
TOTAL ALARM LOAD = 3.430000			
Battery Requirements			
Standby Load	0.090000	X	24.000000 = 2.160000
Alarm Load	3.430000	X	0.083333 = 0.285833
Total Ampere Hours (before derating factor)			2.445833
Derating Factor			X = 1.2
TOTAL AMPERE HOURS REQUIRED = 2.935600			
BATTERIES TO BE PROVIDED (2 - 12v) 7 AH			

FPS2 Battery Calculation 5/16/2014
PROJECT NAME: 27 PEARL STREET BUILDING
Required Standby Time: 24 Hours
Required Alarm Time: 5 Minutes

Regulated Load in Standby			
Device Type	Number of Devices	Current (Amps)	Total Current (Amps)
Altronix AL802ULADA	1	0.090000	0.090000
TOTAL STANDBY LOAD = 0.090000			
Regulated Load in ALARM			
Device Type	Number of Devices	Current (Amps)	Total Current (Amps)
Altronix AL802ULADA	1	0.175000	0.175000
FPS2-1 (See voltage drop calcs for device quantity)	1	0.827000	0.827000
FPS2-2	1	0.971000	0.971000
TOTAL ALARM LOAD = 1.973000			
Battery Requirements			
Standby Load	0.090000	X	24.000000 = 2.160000
Alarm Load	1.973000	X	0.083333 = 0.16442
Total Ampere Hours (before derating factor)			2.32442
Derating Factor			X = 1.2
TOTAL AMPERE HOURS REQUIRED = 2.78930			
BATTERIES TO BE PROVIDED (2 - 12v) 7 AH			

REVISION	DESCRIPTION	DATE
0	ISSUED FOR REVIEW & APPROVAL	5/19/2014

RESERVED FOR CITY STAMP

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27 PEARL STREET
PORTLAND, MAINE 04101
BASMENT FIRE ALARM PLAN, BATTERY CALCS

DRAWN	JPB	UNICAD JOB #14257
CHECKED	WAYNE B. HAWES	NCET # 90496
DATE	5/15/2014	
REVISION	0	
SCALE	1/8"=1'-0"	