



OPERATIONS MATRIX	
FIRE ALARM INPUT	FIRE ALARM OUTPUT
SMOKE DETECTORS	ACTIVATE ALARM INDICATOR
PULL STATIONS	ACTIVATE AUDIBLE ALARM
VALVE TAMPER SWITCHES	ACTIVATE SUPERVISORY INDICATOR
LOW AIR PRESSURE SWITCH	ACTIVATE AUDIBLE SUPERVISORY SIGNAL
FIRE ALARM AC POWER FAIL	ACTIVATE TROUBLE INDICATOR
FIRE ALARM LOW BATTERY	ACTIVATE AUDIBLE TROUBLE INDICATOR
OPEN CIRCUIT	TRANSMIT ALARM SIGNAL
GROUND FAULT	TRANSMIT SUPERVISORY SIGNAL
NAC SHORT CIRCUIT	TRANSMIT TROUBLE SIGNAL
LOSS OF AC TO BUILDING	

FCP Battery Calculation				10/1/2014
PROJECT NAME: 1854 FOREST AVENUE				
Required Standby Time: 224 Hours				
Required Alarm Time: 5 Minutes				
Regulated Load in Standby				
Device Type	Number of Devices	Current (amps)	Total Current (amps)	
MS-9050UD Main Circuit Board	1	0.172000	0.172000	
ANN-80 Remote Annunciator	1	0.015900	0.015900	
SD353 Smoke Detector	1	0.000350	0.000350	
80-12X Pull Stations	4	0.00023	0.00092	
AMM-500 Monitor Modules	4	0.00040	0.00160	
TOTAL STANDBY LOAD				0.13782
Regulated Load in ALARM				
Device Type	Number of Devices	Current (amps)	Total Current (amps)	
MS-9050UD Main Circuit Board	1	0.200000	0.200000	
ANN-80 Remote Annunciator	1	0.040000	0.040000	
All Addressable Devices - Maximum Draw	1	0.400000	0.400000	
NAC-1	1	0.610000	0.610000	
NAC-2	1	0.425000	0.425000	
TOTAL ALARM LOAD				1.67300
Battery Requirements				
Standby Load	0.13782	X	Required Standby Time in Hours	3,307.68
Alarm Load	1.67300	X	Required Alarm Time in Hours	3,447.10
Current (Amps)	0.13782	X	Derating Factor	1.2
Total Ampere Hours (before derating factor)	0.08333	=		4,136.62
BATTERIES TO BE PROVIDED (2 - 12V)				7 AH

FIRE ALARM SYMBOL LEGEND		
SYMBOL	DESCRIPTION	MOUNTING
[FCP]	FIRE ALARM CONTROL PANEL	WALL-TOP @ 66"
[FES]	FIRE ALARM POWER SUPPLY	FIELD VERIFY
[FSA]	FIRE SYSTEM ANNUNCIATOR	WALL-TOP @ 66"
[FSD]	FIRE/SMOKE DAMPER	BY OTHERS
[SD]	SMOKE DETECTOR	CEILING
[DST]	DUCT SMOKE DETECTOR	BY OTHERS
[H]	HEAT DETECTOR	CEILING
[AM]	ADDRESSABLE CONTROL MODULE	FIELD VERIFY
[MM]	ADDRESSABLE MONITOR MODULE	FIELD VERIFY
[P]	MANUAL PULL STATION	WALL @ 48"
[R]	CONTROL RELAY (MULTI-VOLTAGE)	FIELD VERIFY
[RM]	ADDRESSABLE RELAY MODULE	FIELD VERIFY
[M]	MAGNETIC DOOR HOLDER	FIELD VERIFY
[S]	WATER FLOW SWITCH	BY OTHERS
[T]	VALVE TAMPER SWITCH	BY OTHERS
[LA]	LOW AIR PRESSURE SWITCH	BY OTHERS
[B]	BELL	BY OTHERS
[CS]	CEILING MOUNT STROBE	FIELD VERIFY
[CSH]	CEILING MOUNT SPEAKER / STROBE	FIELD VERIFY
[H]	HORN	WALL @ 10'-0"
[HSH]	HORN / STROBE	WALL 80"-96"
[SS]	SPEAKER / STROBE	WALL 80"-96"
[S]	SPEAKER	WALL @ 90"
[K]	KNOX BOX	WALL 80"-96"
[V]	FIELD VERIFY	FIELD VERIFY

REVISION	DESCRIPTION	DATE
0	ISSUED FOR REVIEW & APPROVAL	2/23/2012
1	REVISED PER CLIENT MARK UP	10/2/2014

CUNNINGHAM

Security Systems

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1854 FOREST AVENUE PORTLAND, ME 04103 FIRE ALARM PLAN	<p>SCALE: 1/8" = 1'-0"</p> <p>DATE: 2/22/2012</p> <p>REVISION: 1</p> <p>DRAWN: JPB UNICAD JOB #12058</p> <p>CHECKED: WAYNE B. HANS NICTE # 90486</p> <p>SCALE: 1/8" = 1'-0"</p> <p>FA-1</p>
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