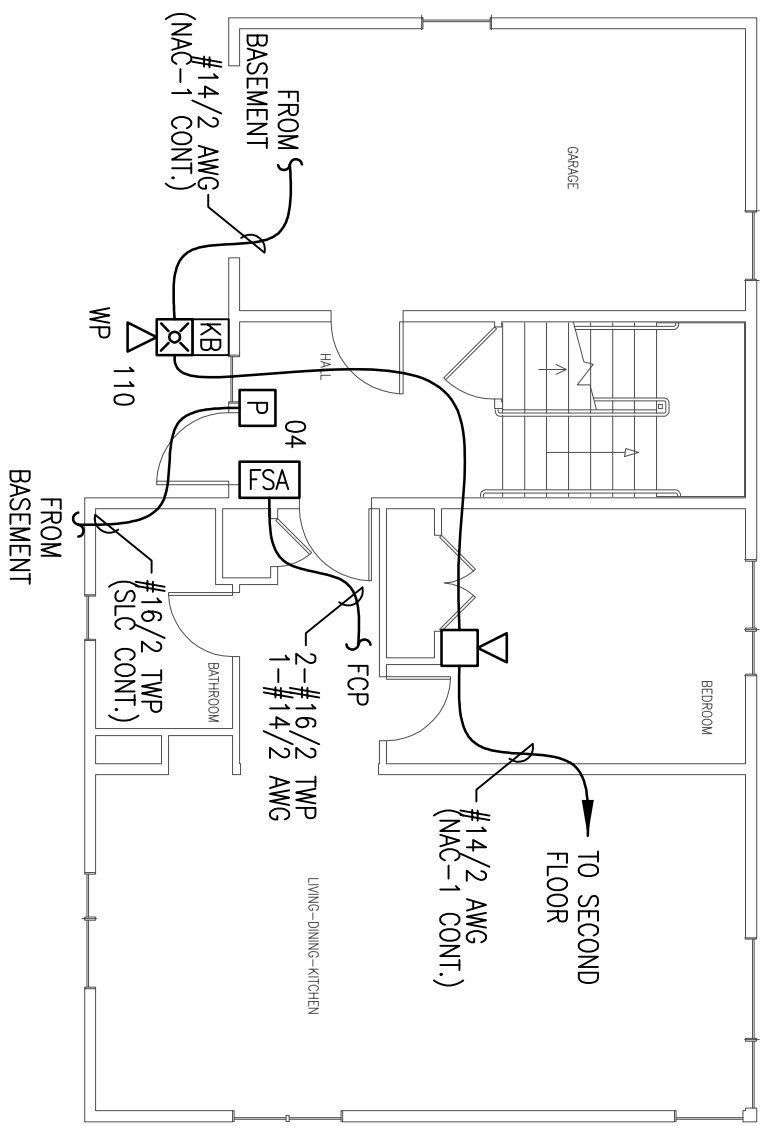
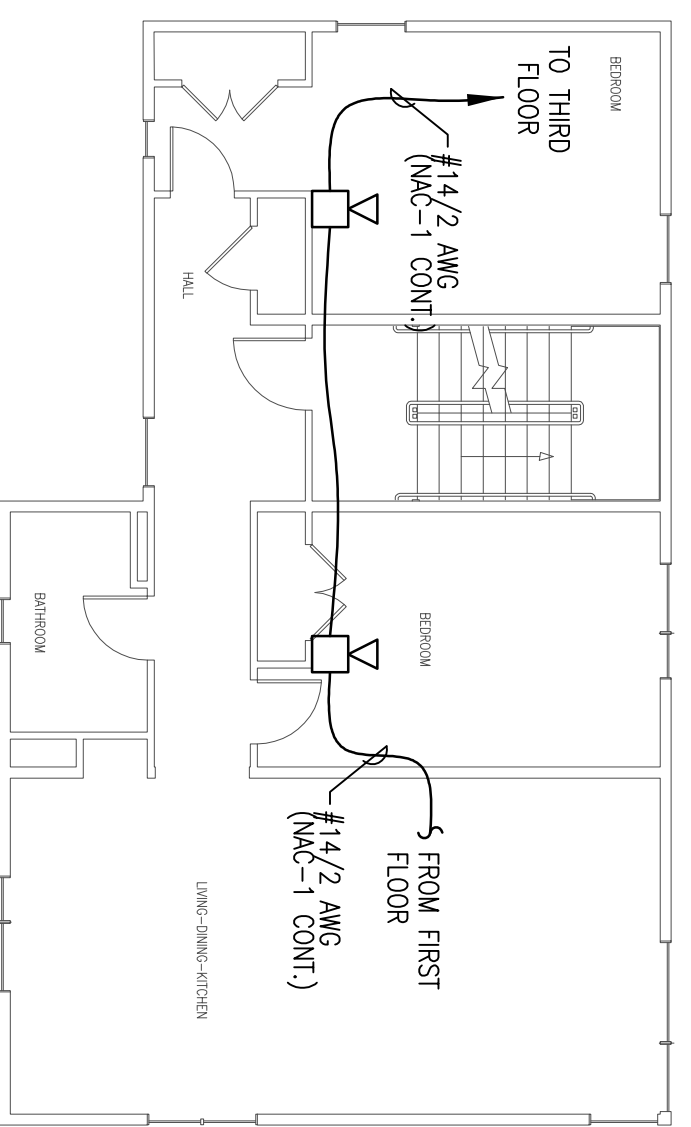


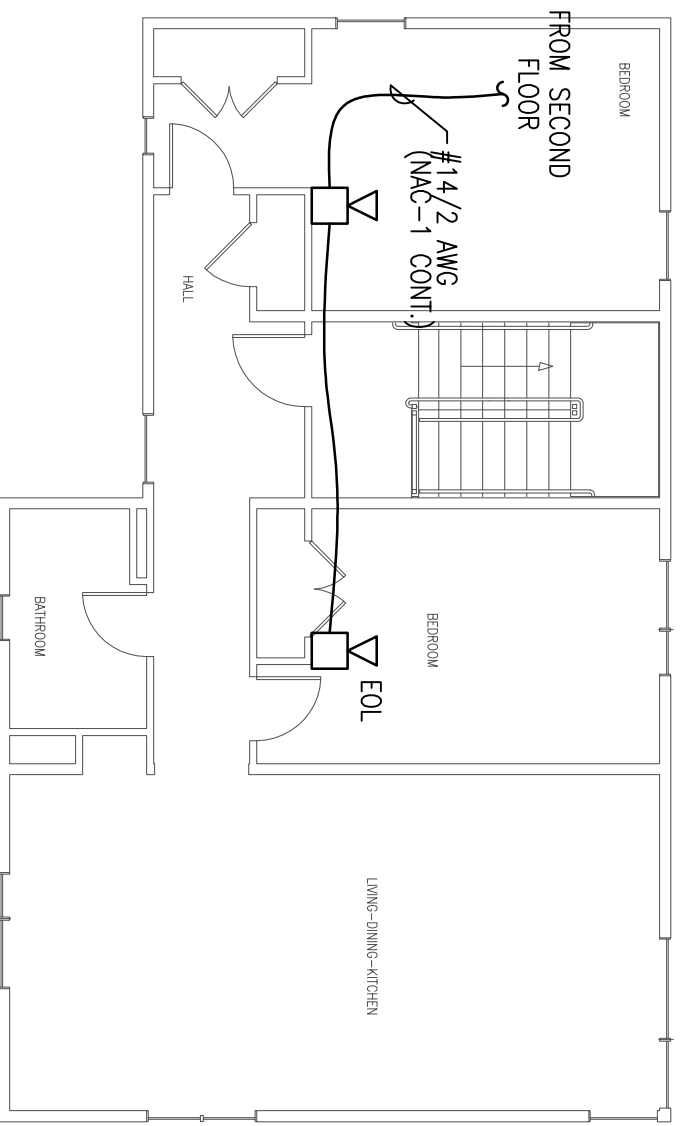
BASEMENT FIRE ALARM PLAN
SCALE: 1/8"=1'-0"



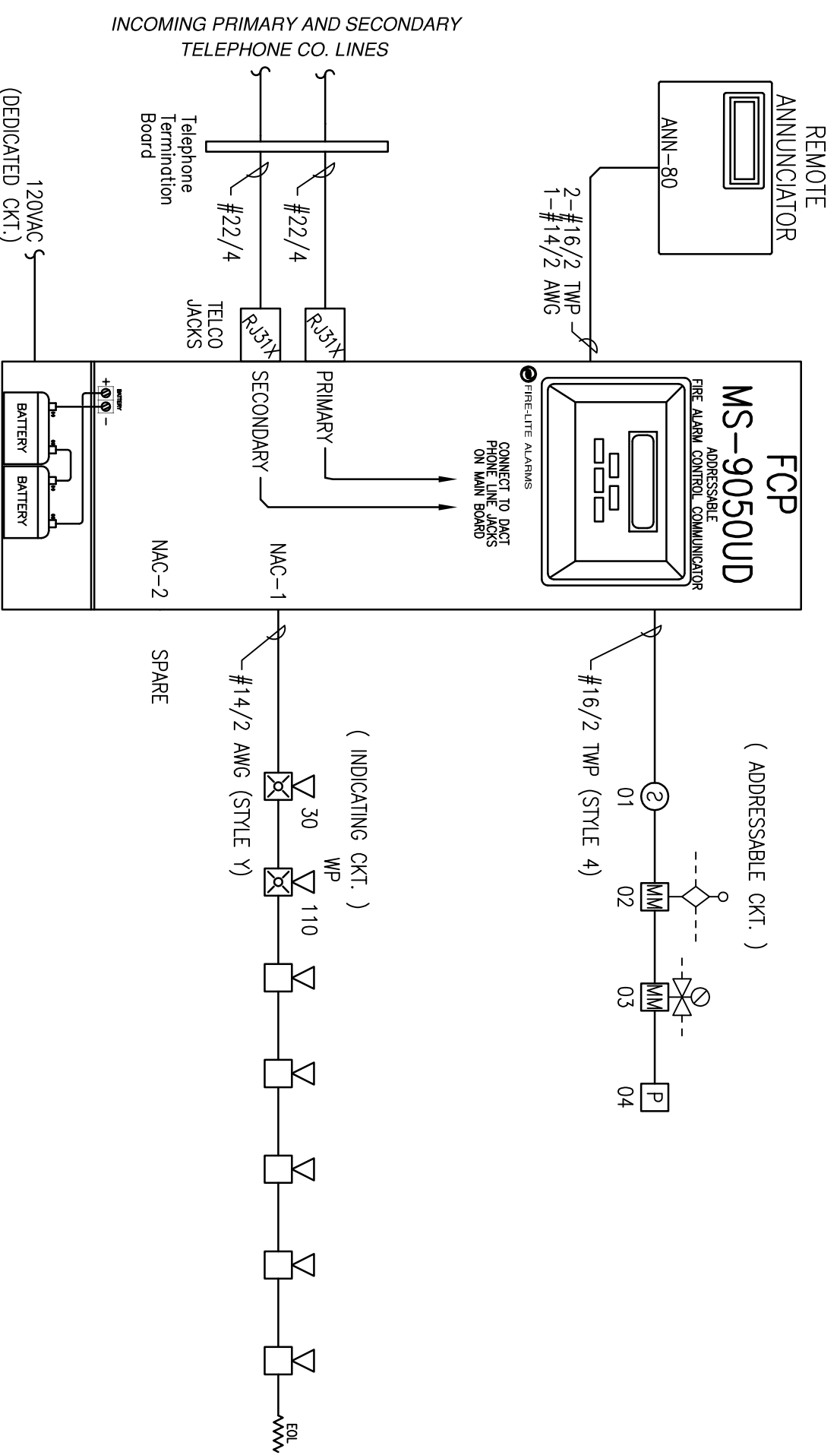
FIRST FLOOR FIRE ALARM PLAN
SCALE: 1/8"=1'-0"



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



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



FIRE ALARM RISER DIAGRAM
SCHEMATIC: NO SCALE

GENERAL NOTES:

- THESE DRAWINGS ARE DIAGNOSTIC. REFER TO THE ARCHITECTURAL DRAWINGS FOR EXACT DIMENSIONS.
- INSTALLATION SHALL COMPLY WITH NEC, NFPA 72 AND ALL OTHER APPLICABLE CODES AS REQUIRED BY THE LOCAL AUTHORITY HAVING JURISDICTION.
- WIRING DEPICTED ON THESE PLANS IS SCHEMATIC - ACTUAL WIRE LOCATIONS MAY DIFFER FROM THESE. WIRING SHALL BE PERFORMED AS ACTUAL BUILDING CONSTRUCTION CONDITIONS ALLOW AND TO MINIMIZE PENETRATIONS THROUGH AREA SEPARATION WALLS AND FIRE WALLS. THE USE OF A RACEWAY IS PERMITTED AS LONG AS NO 110V OR HIGHER VOLTAGE CABLES ARE IN THE SAME RACEWAY.
- FIRE RATINGS SHALL BE MAINTAINED FOR ALL PENETRATIONS THROUGH FIRE-RATED CONSTRUCTION.
- POWER FOR ALL FIRE ALARM PANELS AND FIRE ALARM POWER SUPPLIES MUST BE PROVIDED BY A DEDICATED AC BRANCH CIRCUIT.
- POWER-LIMITED AND NONPOWER-LIMITED CIRCUIT WIRING MUST REMAIN SEPARATED IN CABINET. ALL POWER-LIMITED CIRCUIT WIRING MUST REMAIN AT LEAST 0.25" AWAY FROM ANY NONPOWER-LIMITED CIRCUIT WIRING. FURTHERMORE, ALL POWER-LIMITED AND NONPOWER-LIMITED CIRCUIT WIRING MUST ENTER AND EXIT THE CABINET THROUGH DIFFERENT KNOCK OUTS AND/OR SEPARATE CONDUITS.
- WHEN UTILIZING CLASS "A" CIRCUITS, SEPARATE OUTGOING AND RETURN CONDUCTORS OF CLASS "A" CIRCUITS BY A MINIMUM OF 12" WHERE RUN VERTICALLY AND 48" WHERE RUN HORIZONTALLY.
- WHEN UTILIZING SHIELDED CABLE THE SHIELDS THROUGH AND INSULATE AT EACH JUNCTION BOX. INSULATE AND TAPE BACK AT END.
- ALL FIRE ALARM CABLING SHALL BE ACCEPTABLE TO THE FIRE ALARM EQUIPMENT MANUFACTURER FOR THE INTENDED PURPOSE.
- SMOKE DETECTORS SHALL NOT BE INSTALLED UNTIL AFTER CONSTRUCTION CLEAN-UP IS COMPLETED AND FINAL.
- LOCATE SMOKE DETECTORS A MINIMUM OF THREE (3) FEET FROM MECHANICAL DIFFUSERS. WALL-MOUNTED SMOKE DETECTORS SHALL BE LOCATED A MINIMUM OF 4" AND A MAXIMUM OF 12" FROM CEILING. CEILING-MOUNTED SMOKE DETECTORS SHALL BE MOUNTED ON CEILINGS AND NOT ON THE BOTTOMS OF BEAMS OR JOISTS.
- PROVIDE SYNCHRONIZATION OF ALL VISUAL NOTIFICATION APPLIANCE CIRCUITS. PROVIDE ALL REQUIRED SYNC MODULES. PROVIDE A MULTI-SYNC MODE SLAVE CONNECTION BETWEEN ALL SYNC MODULES.
- VERIFY ALL FIELD SELECTABLE AUDIBILITY SETTINGS OF NOTIFICATION APPLIANCES WITH FIRE ALARM CONTRACTOR.
- UPON COMPLETION OF THE FIRE ALARM SYSTEM INSTALLATION AND PROGRAMMING, THE INSTALLING CONTRACTOR SHALL PERFORM FINAL TESTING OF THE ENTIRE SYSTEM, PER ALL APPLICABLE CODES, AND SHALL COORDINATE AND PERFORM A FINAL FIRE ALARM SYSTEM INSPECTION.
- PROVIDE OFF-SITE MONITORING AS REQUIRED BY THE INTERNATIONAL FIRE CODE, SECTION 907.15 AND THE LOCAL AUTHORITY HAVING JURISDICTION.
- INSTALLING CONTRACTOR SHALL, PHYSICALLY, LABEL ALL INITIATING DEVICES AND NOTIFICATION APPLIANCE CIRCUIT END OF LINE (WHEN WIRING CLASS "B"), THESE LABELS SHALL BE IN PLACE PRIOR TO START-UP AND TESTING.

SHEET NOTES:

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).

FCP Battery Calculation

PROJECT NAME: 56 HAMMOND STREET
Required Standby Time: 24 Hours
Required Alarm Time: 3 Minutes

Regulated Load in Standby			
Device Type	Number of Devices	Current (Amps)	Total Current (Amps)
MS-9050UD Main Circuit Board	1	0.12000	0.12000
ANN-80 Remote Annunciator	1	0.01500	0.01500
SD355 Smoke Detector	1	0.00030	0.00030
MMF-300 Monitor Modules	2	0.00040	0.00080
BG-121X Full Station	1	0.00023	0.00023
TOTAL STANDBY LOAD			0.13633

Regulated Load in ALARM			
Device Type	Number of Devices	Current (Amps)	Total Current (Amps)
MS-9050UD Main Circuit Board	1	0.20000	0.20000
ANN-80 Remote Annunciator	1	0.04000	0.04000
All Addressable Devices - Maximum Draw	1	0.40000	0.40000
M/C-1	1	0.66400	0.66400
TOTAL ALARM LOAD			1.30400

Battery Requirements			
Standby Load	Required Standby Time in Hours	Current (Amps)	Required Standby Time in Hours
0.13633 X	24	0.20000	1.30400
1.30400 X	3	0.08333	1.2
TOTAL AMPERE HOURS REQUIRED			4.05670
BATTERIES TO BE PROVIDED (2 - 12V)			7 AH

FIRE ALARM SYMBOL LEGEND

SYMBOL	DESCRIPTION	MOUNTING
FCP	FIRE ALARM CONTROL PANEL	WALL-10P @ 66"
FPS	FIRE ALARM POWER SUPPLY	FIELD VENT*
FSA	FIRE SYSTEM ANNUNCIATOR	WALL-10P @ 66"
SD	SMOKE DETECTOR	CEILING
SD	DUCT SMOKE DETECTOR	BY OTHERS
HD	HEAT DETECTOR	CEILING
CM	ADDRESSABLE CONTROL MODULE	FIELD VENT*
MM	ADDRESSABLE MONITOR MODULE	FIELD VENT*
EP	MANUAL PULL STATION	WALL-10P @ 48"
ER	CONTROL RELAY (MULTI-VOLTAGE)	FIELD VENT*
RM	ADDRESSABLE RELAY MODULE	FIELD VENT*
WF	WATER FLOW SWITCH	BY OTHERS
VT	VALVE TAMPER SWITCH	WALL @ 10'-0"
HN	MAN HORN	WALL 80"-96"
SH	HORN / STROBE	WALL 80"-96"
ST	STROBE	WALL 80"-96"
ABBREVIATION	DESCRIPTION	
E	EXISTING	
G	WITH GUARD	
P	PENDENT MOUNT	
R	RESIDENTIAL (110V)	
S	SOULDER BASE	
WP	WEATHER PROOF	
EOL	END OF LINE RESISTOR	
REL	RELAY	
AWG	AMERICAN WIRE GAUGE	
TWP	TWISTED SHIELDED PAIR	
PLP	FIRE POWER LIMITED PLENUM	
PLR	FIRE POWER LIMITED RISER	

OPERATIONS MATRIX

DESCRIPTION	FIRE ALARM INPUT	FIRE ALARM OUTPUT	ACTIVATE ALARM INDICATOR	ACTIVATE AUDIBLE ALARM	ACTIVATE SUPERVISORY INDICATOR	ACTIVATE AUDIBLE SUPERVISORY SIGNAL	ACTIVATE TROUBLE INDICATOR	ACTIVATE AUDIBLE TROUBLE INDICATOR	TRANSMIT ALARM SIGNAL	TRANSMIT SUPERVISORY SIGNAL	TRANSMIT TROUBLE SIGNAL
SMOKE DETECTORS			●	●	●	●	●	●	●	●	●
PULL STATIONS			●	●	●	●	●	●	●	●	●
WATERFLOW SWITCHES			●	●	●	●	●	●	●	●	●
VALVE TAMPER SWITCHES			●	●	●	●	●	●	●	●	●
FIRE ALARM AC POWER FAIL			●	●	●	●	●	●	●	●	●
FIRE ALARM LOW BATTERY			●	●	●	●	●	●	●	●	●
OPEN CIRCUIT			●	●	●	●	●	●	●	●	●
GROUND FAULT			●	●	●	●	●	●	●	●	●
M/C SHORT CIRCUIT			●	●	●	●	●	●	●	●	●
LOSS OF AC TO BUILDING			●	●	●	●	●	●	●	●	●

NMC Circuit Voltage Drop Calculation

Project Name: 56 HAMMOND STREET
Project Number: NMC-1

Max Output Current: 2.51 amps
Total Circuit Current: 0.664 amps

Device	Current (Amps)	Distance from source (feet)	Voltage drop (Volts)	Percent Drop
Device 1	0.107	20.39	0.01	0%
Device 2	0.212	20.28	0.12	1%
Device 3	0.059	20.23	0.17	1%
Device 4	0.059	20.21	0.19	1%
Device 5	0.059	20.19	0.21	1%
Device 6	0.059	20.18	0.22	1%
Device 7	0.059	20.17	0.23	1%
Totals		115	0.664	

HAMMOND APARTMENTS
56 HAMMOND STREET
PORTLAND, ME 04101
BUILDING 1 & 2 FIRE ALARM PLAN

CUNNINGHAM
Security Systems

10 Princes Point Road, Yarmouth, Maine 04096
Office: 207.846.3350 • Fax: 207.846.6080

REVISION	DESCRIPTION	DATE
0	ISSUED FOR REVIEW & APPROVAL	12/31/2012
1	REVISED PER CLIENT REVIEW	1/15/2013

REVISION 1
SCALE 1/8" = 1'-0"

FA-1

DESIGN: JPB
UNICAD, INC.
CHECKED: WAYNE B. HANS
NICTE IV 90486
DATE: 12/31/2012