

REVISION	DESCRIPTION	DATE
0	ISSUED FOR REVIEW & APPROVAL	3/24/2016

RESERVED FOR CITY STAMP

**CUNNINGHAM**

**Security Systems**

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

**LIQUID**  
**66 PEARL STREET**  
**PORTLAND, MAINE 04101**  
**THIRD FLOOR TI FIRE ALARM PLAN**

DRAWN	JPB	UNICAD JOB #16179
CHECKED	WAYNE B. HAYS	NCET # 90496
DATE	3/24/2016	
REVISION	0	
SCALE	1/8"=1'-0"	

**FA-2**

**UNICAD** Inc.  
Fire Alarm Design & Drafting Services  
578 W. 40th St.  
Portland, ME 04101  
www.unicad.net



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

**NAAC Circuit Voltage Drop Calculation** 3/24/2016

Project Name	66 PEARL STREET
Circuit Number	FPSZ-4
Nominal System Voltage	20.4 volts
Minimum Device Voltage	16 volts
Distance from source to 1st device	40
Wire Gauge for balance of circuit	14
Resistance Per 1000	6.14
Wire Gauge	14
Max Output Current	2.0 amps
Total Circuit Current	1.713 amps

Circuit is within limits					
Device	Distance previous device	Device Current	Voltage at Device	Drop from source	Percent Drop
Phase 1	0.176	0.066	19.98	0.42	2%
Device 1	19.72	0.68	19.30	0.68	3%
Phase 1	0.176	0.066	19.12	0.18	1%
Device 2	19.62	0.78	18.34	0.78	4%
Phase 1	0.066	0.066	19.34	0.06	0%
Device 3	19.22	1.18	18.16	1.18	6%
Phase 1	0.079	0.079	19.22	0.07	0%
Device 4	18.94	1.46	16.68	1.46	7%
Phase 1	0.176	0.176	18.87	0.15	1%
Device 5	18.72	1.53	15.15	1.53	8%
Phase 1	0.107	0.107	18.85	0.15	1%
Device 6	18.74	1.66	13.49	1.66	8%
Phase 1	0.218	0.218	18.68	1.72	9%
Device 7	18.61	1.79	11.70	1.79	9%
Phase 2	0.176	0.176	18.57	1.83	9%
Device 8	18.57	1.83			
Totals	1.713	293			

**NAAC Circuit Voltage Drop Calculation** 3/21/2016

Project Name	66 PEARL STREET
Circuit Number	FPSZ-3
Nominal System Voltage	20.4 volts
Minimum Device Voltage	16 volts
Distance from source to 1st device	70
Wire Gauge for balance of circuit	14
Resistance Per 1000	6.14
Wire Gauge	14
Max Output Current	2.0 amps
Total Circuit Current	0.592 amps

Circuit is within limits					
Device	Distance previous device	Device Current	Voltage at Device	Drop from source	Percent Drop
Device 1	0.218	0.066	20.15	0.25	1%
Device 2	20.07	0.33	20.07	0.33	2%
Device 3	20.06	0.34	20.06	0.35	2%
Device 4	20.05	0.35	20.05	0.40	2%
Device 5	0.176	0.176	20.00	0.40	2%
Totals	0.592	159			