



PLAN NORTH
FIFTH FLOOR FIRE ALARM PLAN
 SCALE: 1/4"=1'-0"

NAC Circuit Voltage Drop Calculation 4/10/2013

Project Name: 111 COMMERCIAL STREET
 Circuit Number: FPS1-1

Nominal System Voltage	20.4 volts	Wire Gauge	14	Resistance Per 1000	6.14
Minimum Device Voltage	16 volts	Wire Gauge	14	Resistance Per 1000	6.14
Distance from source to 1st device	20	Wire Gauge for balance of circuit	14		

Max Output Current: 1.5 amps
 Total Circuit Current: 0.704 amps

Circuit is within limits

Device	Device Current	Distance previous device	Voltage at Device	Drop from source	Percent Drop
Device 1	0.176		20.31	0.09	0%
Device 2	0.176	37	20.19	0.21	1%
Device 3	0.176	61	20.06	0.34	2%
Device 4	0.176	37	20.02	0.38	2%
Totals	0.704	155			

NAC Circuit Voltage Drop Calculation 4/10/2013

Project Name: 111 COMMERCIAL STREET
 Circuit Number: FPS1-2

Nominal System Voltage	20.4 volts	Wire Gauge	14	Resistance Per 1000	6.14
Minimum Device Voltage	16 volts	Wire Gauge	14	Resistance Per 1000	6.14
Distance from source to 1st device	35	Wire Gauge for balance of circuit	14		

Max Output Current: 1.5 amps
 Total Circuit Current: 0.800 amps

Circuit is within limits

Device	Device Current	Distance previous device	Voltage at Device	Drop from source	Percent Drop
Device 1	0.066		20.23	0.17	1%
Device 2	0.079	6	20.20	0.20	1%
Device 3	0.079	14	20.14	0.26	1%
Device 4	0.176	45	19.99	0.41	2%
Device 5	0.079	33	19.90	0.50	2%
Device 6	0.176	27	19.85	0.55	3%
Device 7	0.066	45	19.81	0.59	3%
Device 8	0.079	28	19.80	0.60	3%
Totals	0.800	233			

NAC Circuit Voltage Drop Calculation 4/10/2013

Project Name: 111 COMMERCIAL STREET
 Circuit Number: FPS1-3

Nominal System Voltage	20.4 volts	Wire Gauge	14	Resistance Per 1000	6.14
Minimum Device Voltage	16 volts	Wire Gauge	14	Resistance Per 1000	6.14
Distance from source to 1st device	30	Wire Gauge for balance of circuit	14		

Max Output Current: 1.5 amps
 Total Circuit Current: 0.996 amps

Circuit is within limits

Device	Device Current	Distance previous device	Voltage at Device	Drop from source	Percent Drop
Device 1	0.079		20.22	0.18	1%
Device 2	0.066	11	20.15	0.25	1%
Device 3	0.066	20	20.05	0.35	2%
Device 4	0.079	19	19.96	0.44	2%
Device 5	0.079	19	19.88	0.52	3%
Device 6	0.107	18	19.81	0.59	3%
Device 7	0.107	13	19.77	0.63	3%
Device 8	0.079	26	19.70	0.70	3%
Device 9	0.079	7	19.69	0.71	4%
Device 10	0.176	11	19.67	0.73	4%
Device 11	0.079	20	19.66	0.74	4%
Totals	0.996	194			

NAC Circuit Voltage Drop Calculation 4/10/2013

Project Name: 111 COMMERCIAL STREET
 Circuit Number: FPS1-4

Nominal System Voltage	20.4 volts	Wire Gauge	14	Resistance Per 1000	6.14
Minimum Device Voltage	16 volts	Wire Gauge	14	Resistance Per 1000	6.14
Distance from source to 1st device	40	Wire Gauge for balance of circuit	14		

Max Output Current: 1.5 amps
 Total Circuit Current: 0.930 amps

Circuit is within limits

Device	Device Current	Distance previous device	Voltage at Device	Drop from source	Percent Drop
Device 1	0.079		20.17	0.23	1%
Device 2	0.066	11	20.11	0.29	1%
Device 3	0.066	20	20.02	0.38	2%
Device 4	0.176	12	19.96	0.44	2%
Device 5	0.079	11	19.93	0.47	2%
Device 6	0.079	22	19.87	0.53	3%
Device 7	0.107	4	19.86	0.54	3%
Device 8	0.066	26	19.81	0.59	3%
Device 9	0.212	26	19.78	0.62	3%
Totals	0.930	172			

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PORTLAND, MAINE 04101
FIFTH FLOOR FIRE ALARM PLAN

DRAWN	JPB UNICAD JOB #13155
CHECKED	WAYNE B. HAWS NICET N 90496
DATE	4/8/2013
REVISION	1
SCALE	1/4"=1'-0"

