131 JOHNSON RD 2ND FLOOR 4009 NAC

Module	Qty	Description		Standby Current	Total Standby	Alarm Current	Total Alarm
Panel Equipment							
4009-9201	1	4009 IDNET NAC EXTENDER, 120 VAC		0.0850	0.0850	0.1850	0.1850
		Panel Totals			0.0850		0.1850
Notification Appliances							
4906-9101	27	V/O MC NON-ADDRESS, RED, WALL	15	0.0000	0.0000	0.0600	1.6200
4906-9101	2	V/O MC NON-ADDRESS, RED, WALL	30	0.0000	0.0000	0.0940	0.1880
4906-9101	1	V/O MC NON-ADDRESS, RED, WALL	75	0.0000	0.0000	0.1860	0.1860
4906-9127	2	A/V MC NON-ADDRESS, RED, WALL	110	0.0000	0.0000	0.2850	0.5700
4906-9127	4	A/V MC NON-ADDRESS, RED, WALL	15	0.0000	0.0000	0.0750	0.3000
4906-9127	2	A/V MC NON-ADDRESS, RED, WALL	30	0.0000	0.0000	0.1160	0.2320
4906-9127	2	A/V MC NON-ADDRESS, RED, WALL	75	0.0000	0.0000	0.2210	0.4420
		Peripheral Totals			0.0000		3.5380
		Added Current for EPS Conversion of 24 to 29 Volt IDNoc Devices			0.0000		0.0000
		RUI Totals	0		0.0000		0.0000
		Address Totals	0 Addresses		0.0000		0.0000
		System Totals*:		Standby	0.0850	Alarm	3.7230

Battery Set #1 (Cabinet/Charger #1)	Standby Current	Standby Total	Alarm Current	Alarm Total
Select ALL Power Supplies on this battery set:				
4009		0.0850		3.7230
	Sub Total	0.0850		3.7230
	Total	0.0850		3.7230

Standby Time = 24 Hrs x 0.0850 = 2.0400 Standby Ah
Alarm Time = 5 Min 0.08333 x 3.723 = 0.3103 Alarm Ah
2.3503
Additional Spare Battery Capacity = 0% + 0.0000
2.3503
Battery Discharge Factor = 20% + 0.4701
Minimum Battery Required 2081-9272 6.2AH (2x) 2.8203
Battery Supplied 2081-9272 6.2AH (2x)

131 JOHNSON RD 2ND FLOOR 4009 NAC VOLTAGE DROPS

WIRE RESISTANCE BASED ON TABLE 8 FROM NATIONAL ELECTRICAL CODE (UNCOATED SOLID COPPER WIRE) @ 75 Celsius

											PID	4906-9101	4906-9101	4906-9101	4906-9101	4906-9127	4906-9127	4906-9127	4906-9127
											Candela	15cd	30cd	75cd	110cd	15cd	30cd	75cd	110cd
											Device Type	MC V/O	MC V/O	MC V/O	MC V/O	MC A/V	MC A/V	MC A/V	MC A/V
											Supv. Current	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
											Alarm Current	0.0600	0.0940	0.1860	0.2520	0.0750	0.1160	0.2210	0.2850
											Alarm Current @ 23 Volts	0.0600	0.0940	0.1860	0.2520	0.0750	0.1160	0.2210	0.2850
NOTIFICATION CIRCUIT DESCRIPTION	Power Supply	Plan Ckt.	Dist. (D) Feet	Wire Gauge	Wire Res. / Ft. (R)	Total Alarm (A)	V. Drop (A*2D*R)	Volt @ End	% Volt Drop	Min Device Voltage	Max Distance								
2ND FL CIRCUIT 1	4009	NAC2:1	293	14go	0.0031	0.945	1.700	17.800	8.72%	16vdc	603 Ft.	12				3			
2ND FL CIRCUIT 2	4009	NAC2:2	307	14go	0.0031	1.416	2.669	16.831	13.69%	16vdc	403 Ft.	4	2	1		1		2	1
1ST FL CIRCUIT	4009	NAC2:3	300	14go	0.0031	1.177	2.168	17.332	11.12%	16vdc	484 Ft.	11					2		1
SPARE	4009	NAC2:4		14go	0.0031	0.000	0.000	19.500	0.00%	16vdc	0 Ft.								

NOTE:
LUMP SUM METHOD WAS USED TO CALCULATE ALLOWABLE VOLTAGE DROP. THIS METHOD ALLOWS FOR A SMALL MARGIN OF SAFETY, TAKING INTO CONSIDERATION THAT THE ACTUAL INSTALLED CIRCUIT ROUTING MAY DIFFER FROM WHAT IS SHOWN ON THE SHOP DRAWINGS. IF THE ACTUAL CIRCUIT LENGTH IS GOING TO EXCEED THE MAXIMUM ALLOWABLE CIRCUIT LENGTH, CONTACT YOUR LOCAL SIMPLEXGRINNELL DISTRICT OFFICE.

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440 WESTERN AVENUE ASSOCIATES RENOVATION

440 WESTERN AVENUE ASSOCIATES
131 JOHNSON RD
PORTLAND, ME 04102

Revisions shown with △ symbol

ISSUE LOG:

MARK	DATE	CAD	CHK	DESCRIPTION

DRAWN BY:	
CHECKED BY:	
ISSUE DATE:	
JOB #:	
PROJECT #:	147:984795401

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SYSTEM:
FIRE ALARM SYSTEM

SHEET:
CALCULATIONS AND SCHEDULES

FA-601

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