

Battery/Power Calculation Form

Project: Summit at West Pryor

Location: FACP

Notes: Nektar Juice Bar Tenant Finish

* added

Standby: 24 Hours (1440) Minutes

Device	Quantity		Current - Amp/Hr.		Total
FACP (S3)	1	X	0.1110	X24	2.6640
Smoke Detector	44	X	0.0003	X24	0.3168
Heat Detector	3	X	0.0003	X24	0.0216
Duct Detector	0	X	0.0003	X24	
CO Detector	1	X	0.0003	X24	0.0072
Pull Station	8	X	0.0003	X24	0.0576
Monitor Module	17	X	0.000375	X24	0.1530
Control Module	27	X	0.000375	X24	0.2430
Remote Annunciator	1	X	0.05	X24	1.2000
110cd Horn/Strobe	1	X	0	X24	
75cd Horn/Strobe	3	X	0	X24	
30cd Horn/Strobe	3	X	0	X24	
15cd Horn/Strobe	12	X	0	X24	
110cd Strobe Only	0	X	0	X24	
75cd Strobe Only	0	X	0	X24	
30cd Strobe Only	1	X	0	X24	
15cd Strobe Only	7	X	0	X24	
Subtotal:					4.6632
Add 30% for battery depletion:					1.3990
Standby Subtotal:					6.0622

*1 added



Alarm Mode: 10 Minutes

Device	Quantity		Current - Amp/Hr.		Total
FACP (S3)	1	X	0.2430	÷6	0.0405
Smoke Detector	44	X	0.0065	÷6	0.0477
Heat Detector	3	X	0.0065	÷6	0.0033
Duct Detector	0	X	0.0065	÷6	
CO Detector	1	X	0.0072	÷6	0.0012
Pull Station	8	X	0.003	÷6	0.0040
Monitor Module	17	X	0.0006	÷6	0.0017
Control Module	27	X	0.0065	÷6	0.0293
Remote Annunciator	1	X	0.075	÷6	0.0125
110cd Horn/Strobe	1	X	0.162	÷6	0.0270
75cd Horn/Strobe	3	X	0.121	÷6	0.0605
30cd Horn/Strobe	3	X	0.074	÷6	0.0370
15cd Horn/Strobe	12	X	0.054	÷6	0.1080
110cd Strobe Only	0	X	0.148	÷6	
75cd Strobe Only	0	X	0.107	÷6	
30cd Strobe Only	1	X	0.063	÷6	0.0105
15cd Strobe Only	7	X	0.043	÷6	0.0502
Subtotal:					0.4332
Add 30% for battery depletion:					0.1300
Alarm Mode Subtotal:					0.5632

*1 added

Standby Subtotal: 6.0622
 Plus Alarm Mode Subtotal: 0.5632
 System Current Demand: 6.6254

Battery Size: 12vdc 10AH
 Battery Quantity: 2
 Battery Total: 24vdc 10AH

Battery/Power Calculation Form

Project: W.Pryor Retail 1-5

Location: NAC

Notes: Nektar Juice Bar Tenant Finish

*added

Standby: 24 Hours (1440) Minutes

Device	Quantity		Current - Amp/Hr.		Total
HPF24S6	1	X	0.0750000	X24	1.8000
A/V 95cd	2	X	0	X24	
A/V 75cd	7	X	0	X24	
A/V 30cd	0	X	0	X24	
A/V 15cd	6	X	0	X24	
Strobe only 95cd	0	X	0	X24	
Strobe only 75cd	0	X	0	X24	
Strobe only 30cd	0	X	0	X24	
Strobe only 15cd	6	X	0	X24	
Strobe only 185cd	0	X	0	X24	
.		X		X24	
Subtotal:					1.8000
Add 30% for battery depletion:					0.5400
Standby Subtotal:					2.3400

*2 added

*1 added

Alarm Mode: 10 Minutes

Device	Quantity		Current - Amp/Hr.		Total
HPF24S6	1	X	0.1750	÷6	0.0292
A/V 95cd	2	X	0.162	÷6	0.0540
A/V 75cd	7	X	0.121	÷6	0.1412
A/V 30cd	0	X	0.074	÷6	
A/V 15cd	6	X	0.054	÷6	0.0540
Strobe only 95cd	0	X	0.148	÷6	
Strobe only 75cd	0	X	0.107	÷6	
Strobe only 30cd	0	X	0.063	÷6	
Strobe only 15cd	6	X	0.043	÷6	0.0215
Strobe only 185cd	0	X	0.222	÷6	
.	0	X		÷6	
Subtotal:					0.2998
Add 30% for battery depletion:					0.0900
Alarm Mode Subtotal:					0.3898

*2 added

*1 added

Standby Subtotal:	<u>2.3400</u>	Battery Size:	<u>12vdc 7AH</u>
Plus Alarm Mode Subtotal:	<u>0.3898</u>	Battery Quantity:	<u>2</u>
System Current Demand:	<u>2.7298</u>	Battery Total:	<u>24vdc 7AH</u>

PROJECT DETAILS

Project Name : Summit at W.Pryor - Retail
A-D Tenant Finish

Project Code :

Project Location :
Lee's Summit, Missouri

PREPARED BY

Ryan Stacy



12/16/21

Voltage Drop Calculations

POWER SOURCE : NAC 1 MODEL NUMBER : HPF24S6 BRAND : HPP CLASS B 20.4 VOLTS DC POWER

CIRCUIT: NAC Circuit 1 3 Amps 14 AWG 9 DEVICES 25.6 % (0.768) AMPS USED 2.25 % (0.458) VOLTAGE DROP

#	MODEL	CANDELA	PATTERN	VOLUME	TONE	CURRENT (amps)	DISTANCE FROM PREVIOUS DEVICE (Ft)	12 AWG	14 AWG	16 AWG	18 AWG
1	SCRL	15				0.041	15	20.354	20.327	20.283	20.214
2	PC2RL	15	Temporal	High	Electromechanical	0.071	10	20.325	20.281	20.209	20.097
3	PC2RL	15	Temporal	High	Electromechanical	0.071	15	20.285	20.218	20.109	19.938
4	PC2RL	15	Temporal	High	Electromechanical	0.071	15	20.250	20.162	20.020	19.796
5	SCRL	15				0.041	10	20.229	20.129	19.968	19.713
6	SCRL	15				0.000	6	20.218	20.111	19.939	19.667
7	PC2RL	95	Temporal	High	Electromechanical	0.165	35	20.151	20.005	19.771	19.399
8	PC2RL	75	Temporal	High	Electromechanical	0.143	20	20.126	19.966	19.708	19.299
9	PC2RL	95	Temporal	High	Electromechanical	0.165	23	20.111	19.942	19.669	19.238
Voltage Drop								0.289	0.458	0.731	1.162

POWER SOURCE : NAC 1 MODEL NUMBER : HPF24S6 BRAND : HPP CLASS B 20.4 VOLTS DC POWER

CIRCUIT: NAC Circuit 2 3 Amps 14 AWG 5 DEVICES 15.63 % (0.469) AMPS USED 1.36 % (0.277) VOLTAGE DROP

#	MODEL	CANDELA	PATTERN	VOLUME	TONE	CURRENT (amps)	DISTANCE FROM PREVIOUS DEVICE (Ft)	12 AWG	14 AWG	16 AWG	18 AWG
1	SCRL	15				0.041	55	20.296	20.235	20.138	19.983
2	PC2RL	15	Temporal	High	Electromechanical	0.071	9	20.281	20.210	20.099	19.921
3	PC2RL	15	Temporal	High	Electromechanical	0.071	13	20.262	20.180	20.052	19.846
4	PC2RL	75	Temporal	High	Electromechanical	0.143	19	20.240	20.145	19.997	19.758
5	PC2RL	75	Temporal	High	Electromechanical	0.143	24	20.226	20.123	19.962	19.703
Voltage Drop								0.174	0.277	0.438	0.697

POWER SOURCE : NAC 1 MODEL NUMBER : HPF24S6 BRAND : HPP CLASS B 20.4 VOLTS DC POWER

CIRCUIT: NAC Circuit 3 3 Amps 14 AWG 4 DEVICES 13.27 % (0.398) AMPS USED .88 % (0.179) VOLTAGE DROP

#	MODEL	CANDELA	PATTERN	VOLUME	TONE	CURRENT (amps)	DISTANCE FROM PREVIOUS DEVICE (Ft)	12 AWG	14 AWG	16 AWG	18 AWG
1	PC2RL	15	Temporal	High	Electromechanical	0.071	45	20.328	20.286	20.218	20.111
2	SCRL	15				0.041	8	20.317	20.269	20.191	20.069
3	PC2RL	75	Temporal	High	Electromechanical	0.143	12	20.303	20.247	20.156	20.014
4	PC2RL	75	Temporal	High	Electromechanical	0.143	29	20.286	20.221	20.114	19.947
Voltage Drop								0.114	0.179	0.286	0.453

POWER SOURCE : NAC 1 MODEL NUMBER : HPF24S6 BRAND : HPP CLASS B 20.4 VOLTS DC POWER

CIRCUIT: NAC Circuit 4 3 Amps 14 AWG 3 DEVICES 10.9 % (0.327) AMPS USED 1.09 % (0.223) VOLTAGE DROP

#	MODEL	CANDELA	PATTERN	VOLUME	TONE	CURRENT (amps)	DISTANCE FROM PREVIOUS DEVICE (Ft)	12 AWG	14 AWG	16 AWG	18 AWG
1	PC2RL	75	Temporal	High	Electromechanical	0.143	96	20.274	20.200	20.081	19.893
2	PC2RL	75	Temporal	High	Electromechanical	0.143	17	20.261	20.180	20.049	19.842
3	SCRL	15				0.041	13	20.259	20.177	20.044	19.833
Voltage Drop								0.141	0.223	0.356	0.567

