

NAC CIRCUIT VOLTAGE DROP

NAC CIRCUIT VOLTAGE DROP							
SECTION A - NAC CKT #2							
APPLIANCE		QTY	AMPS EACH	TOTAL AMPS			
HORN/STROBE - 75		5	0.08	0.4			
STROBE - 15/75		2	0.077	0.154			
TOTAL				0.554			
LOOP LENGTH		280	WIRE SIZE	#14			
NOM. VOLTS		LOSS	FINAL VOLTS	MIN. VOLTS			
	24	0.79	23.21	16			

NOTES:

HAVING JURISDICTION.

PERSONNEL.

INSPECTOR PRIOR TO OCCUPANCY.

ALL FIRE ALARM WIRING MUST BE IN STRICT COMPLIANCE WITH

APPLICABLE SECTIONS OF THE NATIONAL ELECTRICAL CODE (ARTICLE 760) AND ALL APPLICABLE NFPA STANDARDS. INCLUDING CHAPTER

INSTALLATION MUST COMPLY WITH ALL APPLICABLE FEDERAL, STATE, OR LOCAL LAWS, REGULATIONS, CODES, AND SPECIFICATIONS.

ALL INSTALLATIONS MUST BE APPROVED BY THE LOCAL AUTHORITY

WHERE CONDUCTORS ARE RUN IN CONDUIT USE ONLY APPROVED CABLE WITHIN RACEWAYS, PIPES, OR CONDUITS. ALL SHIELDS SHALL

TERMINATE AT THE FIRE ALARM CONTROL PANEL (FACP) ONLY.

COVERED UNTIL AFTER CONSTRUCTION IS COMPLETED AND THE

SUBJECT AREA HAS BEEN CLEANED. WHEN PROJECT IS CLEAN PROTECTIVE COVERS SHALL BE REMOVED BY AUTHORIZED SERVICE

ALL FIRE ALARM SYSTEM WIRING SHALL BE CLEAR FROM SHORTS, OPENS, AND GROUNDS. A SMOKE DETECTOR MUST BE LOCATED

SYSTEMS SHALL BE TESTED AND CERTIFIED IN PRESENCE OF CITY

SYSTEM IS AN ADDRESSABLE SUPERVISED PROTECTED PREMISES

ALL HORN/STROBES ARE 75 CANDELA UNLESS NOTED OTHERWISE.

Main PC Board

Power Supervision Relays

Auxiliary Current Draw from TB4 Terminals 9 & 10

WITHIN FIVE FEET HORIZONTALLY OF THE FIRE ALARM CONTROL

TO AVOID CONTAMINATION AND DUST ACCUMULATION IN THE SMOKE DETECTORS, IT IS RECOMMENDED THAT THE SMOKE DETECTORS BE

NFPA SYMBOLS LEGEND				
R	RELAY			
FCP	FIRE ALARM CONTROL PANEL			
FAA	REMOTE FIRE ALARM ANNUNCIATOR			
①	HEAT DETECTOR			
	DUCT DETECTOR			
Ю	DOOR HOLDER			
•	MANUAL PULL STATION AT 48"			
(C)CO	SMOKE DETECTOR WITH CARBON MONOXIDE SENSOR			
0	SMOKE DETECTOR			
	HORN AT 80" - LOW FREQUENCY			
$\boxtimes$	AUDIO VISUAL, 15 CANDELA UNLESS NOTED OTHERWISE			
∑ ⊠ 110	AUDIO VISUAL, 110 CANDELA AT 80" WALL MOUNTED			
<b>©</b>	CEILING MOUNTED CARBON MONOXIDE SENSOR			
×	STROBE AT 80" 15 CANDELA UNLESS NOTED OTHERWISE			
<i>y</i> √y	FLOW DETECTOR/SWITCH			
Ŗ	TAMPER DETECTOR			
WP	WEATHER PROOF			
<b>\ODE </b>	18/2 CABLE SLC LOOP			
	14/2 OR 16/2 AS REQUIRED, CABLE NAC LOOP			
EOL	END-OF-LINE RESISTOR			
A	AIR PRESSURE DETECTOR			
* ALL	SYMBOLS SHOWN ABOVE MAY NOT APPEAR ON PLANS			

DE SENSOR	RICHARD R. BEARDMORE  NUMBER  SONAL ENGINE  8/28/2023
SE SENSON	
ED OTHERWISE  LL MOUNTED  INSOR  OTED OTHERWISE	Latimer Sommers & Associates, P.A.  CONSULTING ENGINEERS  3639 SW Summerfield Drive, Suite A Topeka, Kansas 66614-3974  8625 College Boulevard, Suite 102 Overland Park, Kansas 66210  Telephone: (785) 233-3232 Email: Isapa@Isapa.com
AC LOOP	© LATIMER, SOMMERS AND ASSOCIATES, P.A., ENGINEERS. THIS DRAWING IS COPYRIGHTED WORK BY LATIMER, SOMMERS AND ASSOCIATES, P.A., ENGINEERS.
R ON PLANS	

IMPROVEMENT

64063

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SUMMIT,

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230 SW MAIN

## Jobsite Information: Main Street Landlord Improvements FCPS-24FS6 / 8 Battery Calculation Entries only to be made in the Yellow cell locations Regulated Load in Standby Total Current Number of Current Device Type Devices (Amps) (Amps) 0.065 0.065

X 0.025 =

		STA	NDBY LOAD	=	0.065
Regulated Load in ALAI	RM				,
	Number of		Current		Total Current
Device Type	Devices		(Amps)		(Amps)
Main PC Board without AC	1	X	0.145	=	0.145
Main i O Board Without 710	1		0.140		0.140
Power Supervision Relays		Χ	0.025	=	0
Auxiliary Current Draw		Х		=	0
from TB4 Terminals 9 & 10					
NAC / Output # 1	6	X	0.066	=	0.396
Strobes					
NAC / Output # 2	9	X	0.08	=	0.72
Horn/Strobes					
NAC / Output # 3		X		=	0
Spare					
NAC / Output # 4		X		=	0

Spare				
	Al	LARM LOAD =	1.261	
		•		
Battery Amp Hour Calculation				
Standby Load		Required Standby Tir	me	
Current (Amps)		(Typically 24 or 60 H	lours)	
0.065	X	24 =	1.56 A	
Alarm Load		Required Alarm Time	)	
Current (Amps)		(Typically 5 or 10 Mir	nutes)	
1.261	X	10 =	0.21 A	
Sub Total	1.77 A			
Multiply by	the Den	ating Factor X	1.2 *	
Total Ampere	Hours	Required =	3 A	
		-		

Main PC Board Without AC	1	Λ	0.145		0.143
		.,			
Power Supervision Relays		X	0.025	=	0
Auxiliary Current Draw		X		=	0
from TB4 Terminals 9 & 10					
NAC / Output # 1	6	Х	0.066	=	0.396
Strobes					
NAC / Output # 2	9	X	0.08	=	0.72
Horn/Strobes					
NAC / Output # 3		X		=	0
Spare					
NAC / Output # 4		X		=	0
Spare					
		Α	LARM LOAD	=	1.261
Battery Amp Hour Calcul	ation				
Standby Load			Required Sta	andby Tin	ne
Current (Amps)			(Typically 24	-	
. ,	0.065	X	24	_	1.56 AF
Alarm Load			Required Ala	arm Time	
Current (Amps)			(Typically 5	or 10 Min	utes)
	1.261	X	10	=	0.21 AF
	Sub Total	Standb	y / Alarm Am	p Hours	1.77 AF
			rating Factor	Х	1.2 *
	Total Ampere	Hours	Required	=	3 Al-

Output # 1 6 X 0.066 = 0.396  SOutput # 2 9 X 0.08 = 0.72  trobes Output # 3 X = 0  Output # 4 X = 0  Output # 4 X = 0  ALARM LOAD = 1.261  ry Amp Hour Calculation  by Load (Typically 24 or 60 Hours)  Calculation  Output # 4 (Typically 24 or 60 Hours)  Calculation  Required Standby Time (Typically 24 or 60 Hours)  Calculation  Required Alarm Time (Typically 5 or 10 Minutes)  Calculation  Required Alarm Time (Typically 5 or 10 Minutes)  Calculation  Required Alarm Time (Typically 5 or 10 Minutes)  Calculation  Required Alarm Time (Typically 5 or 10 Minutes)  Calculation  Required Alarm Time (Typically 5 or 10 Minutes)  Calculation  Calculation  Required Alarm Time (Typically 5 or 10 Minutes)  Calculation  Calculation  Required Alarm Time (Typically 5 or 10 Minutes)  Calculation  Calculation  Calculation  Required Alarm Time (Typically 5 or 10 Minutes)  Calculation	Supervision Relays	lated Load in ALAF	Number of Devices		Current (Amps)		Total Current (Amps)
Y Current Draw	Y Current Draw	C Board without AC	1	Χ	0.145	=	0.145
Output # 1	Output # 1	Supervision Relays		X	0.025	=	0
Output # 1	Output # 1						
Output # 1	Output # 1 6 X 0.066 = 0.396  Solutput # 2 9 X 0.08 = 0.72  Itrobes Output # 3 X = 0  Output # 4 X = 0  ALARM LOAD = 1.261   TY Amp Hour Calculation  Y Load (Typically 24 or 60 Hours)  Output # 4 (Typically 24 or 60 Hours)  Output # 4 (Typically 5 or 10 Minutes)  1.261 X 10 = 0.21 A  Sub Total Standby / Alarm Amp Hours Multiply by the Derating Factor X 1.2 *  Total Ampere Hours Required = 3 A			X		=	0
Output # 2	Output # 2	34 Terminals 9 & 10					
Output # 2	Output # 2	Output # 1	6	Y	0.066		0.396
Output # 2 9 X 0.08 = 0.72  trobes Output # 3 X = 0  Output # 4 X = 0  Output # 4 X = 0  ALARM LOAD = 1.261  ry Amp Hour Calculation  y Load (Typically 24 or 60 Hours)  0.065 X 24 = 1.56 A  Load (Typically 5 or 10 Minutes)  1.261 X 10 = 0.21 A  Sub Total Standby / Alarm Amp Hours  Multiply by the Derating Factor X 1.2 *  Total Ampere Hours Required = 3 A	Output # 2 9 X 0.08 = 0.72  trobes Output # 3 X = 0  Output # 4 X = 0  Output # 4 X = 0  ALARM LOAD = 1.261  ry Amp Hour Calculation  y Load (Typically 24 or 60 Hours)  0.065 X 24 = 1.56 A  Load (Typically 5 or 10 Minutes)  1.261 X 10 = 0.21 A  Sub Total Standby / Alarm Amp Hours  Multiply by the Derating Factor X 1.2 *  Total Ampere Hours Required = 3 A				0.000	_	0.550
Total Ampere Hours Required   Total Ampere   Tota	Total Ampere Hours Required   Total Ampere   Total Ampere   Total Ampere   Total Ampere   Total Ampere Hours   Total Ampere   Total Ampere		9	X	0.08	=	0.72
Output # 3	Output # 3				0.00		3.72
ry Amp Hour Calculation  y Load	ry Amp Hour Calculation  y Load			X		=	0
ALARM LOAD = 1.261  Try Amp Hour Calculation  Ty Load Required Standby Time (Typically 24 or 60 Hours)  O.065 X 24 = 1.56 A  Load Required Alarm Time (Typically 5 or 10 Minutes)  1.261 X 10 = 0.21 A  Sub Total Standby / Alarm Amp Hours Multiply by the Derating Factor X 1.2 *  Total Ampere Hours Required = 3 A	ALARM LOAD = 1.261  ry Amp Hour Calculation  y Load Required Standby Time (Typically 24 or 60 Hours)  0.065 X 24 = 1.56 A  Required Alarm Time (Typically 5 or 10 Minutes)  1.261 X 10 = 0.21 A  Sub Total Standby / Alarm Amp Hours Multiply by the Derating Factor X 1.2 *  Total Ampere Hours Required = 3 A	·					
ry Amp Hour Calculation  y Load	ry Amp Hour Calculation  y Load	Output # 4		X			0
ry Amp Hour Calculation  y Load	ry Amp Hour Calculation  y Load		1				4.000
Required Standby Time	Required Standby Time		Į.	A	LARM LOAD	=	1.261
Required Standby Time	Required Standby Time		1.6				
(Amps)         (Typically 24 or 60 Hours)           0.065         X         24         =         1.56 A           Load (Amps)         Required Alarm Time (Typically 5 or 10 Minutes)         0.21 A           1.261         X         10         =         0.21 A           Sub Total Standby / Alarm Amp Hours Multiply by the Derating Factor         1.77 A           Multiply by the Derating Factor         X         1.2 *           Total Ampere Hours Required         3 A	(Amps)         (Typically 24 or 60 Hours)           0.065         X         24         =         1.56 A           Load (Amps)         Required Alarm Time (Typically 5 or 10 Minutes)         0.21 A           Sub Total Standby / Alarm Amp Hours Multiply by the Derating Factor X         1.77 A           Multiply by the Derating Factor X         1.2 *           Total Ampere Hours Required         3 A	ry Amp Hour Calcu	liation		ID : 16:		-
0.065   X   24   =   1.56 A	0.065   X   24   =   1.56 A					_	
Accord (Amps)  Required Alarm Time (Typically 5 or 10 Minutes)  1.261 X 10 = 0.21 A  Sub Total Standby / Alarm Amp Hours 1.77 A  Multiply by the Derating Factor X 1.2 *  Total Ampere Hours Required = 3 A	Accord (Amps)  Required Alarm Time (Typically 5 or 10 Minutes)  1.261 X 10 = 0.21 A  Sub Total Standby / Alarm Amp Hours 1.77 A  Multiply by the Derating Factor X 1.2 *  Total Ampere Hours Required = 3 A	(Amps)	2 225				
(Amps) (Typically 5 or 10 Minutes)  1.261 X 10 = 0.21 A  Sub Total Standby / Alarm Amp Hours 1.77 A  Multiply by the Derating Factor X 1.2 *  Total Ampere Hours Required = 3 A	(Amps) (Typically 5 or 10 Minutes)  1.261 X 10 = 0.21 A  Sub Total Standby / Alarm Amp Hours Multiply by the Derating Factor X 1.2 *  Total Ampere Hours Required = 3 A	and	0.065	Х			
Sub Total Standby / Alarm Amp Hours  Multiply by the Derating Factor X  Total Ampere Hours Required = 3 A	1.261 X 10 = 0.21 A  Sub Total Standby / Alarm Amp Hours 1.77 A  Multiply by the Derating Factor X 1.2 *  Total Ampere Hours Required = 3 A						
Sub Total Standby / Alarm Amp Hours 1.77 A  Multiply by the Derating Factor X 1.2 *  Total Ampere Hours Required = 3 A	Sub Total Standby / Alarm Amp Hours 1.77 A  Multiply by the Derating Factor X 1.2 *  Total Ampere Hours Required = 3 A	(viliha)	1 261	Y			
Multiply by the Derating Factor X 1.2 *  Total Ampere Hours Required = 3 A	Multiply by the Derating Factor X 1.2 *  Total Ampere Hours Required = 3 A		1.201	^	10	_	U.ZT AF
Multiply by the Derating Factor X 1.2 *  Total Ampere Hours Required = 3 A	Multiply by the Derating Factor X 1.2 *  Total Ampere Hours Required = 3 A		Sub Total	Standh	v / Alarm Am	n Hours	1 77 ΔΙ
Total Ampere Hours Required = 3 A	Total Ampere Hours Required = 3 A						
Section 19 and 1		ng Factor required to com	pensate for the non	-linear o	discharge char	acterist	cic of a battery.

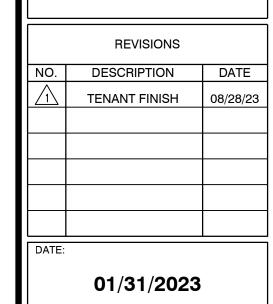
MEN'S WOMEN'S N-103	OFFICE N.100	
	"NAC 1"  FLOW TAMPER  "NAC	

FIRST FLOOR PLAN

1/8"=1'-0"

FIRE ALARM





2304007

FLOOR PLANS - FIRE ALARM

FA1