



A SPRINKLER MONITORING SYSTEM SUBMITTAL

H & E EQUIPMENT SERVICES #4186

1100 SW HAMBLÉN RD
LEE'S SUMMIT, MO 64081



BRANCH #66711
15441 W 100th TERRACE,
LENEXA, KS 66219

844-538-3766
WEB: EVERONSOLUTIONS.COM

H&E EQUIPMENT
1100 SW HAMBLÉN RD
LEE'S SUMMIT, MO 64081

SPRINKLER MONITORING SYSTEM

This fire alarm shop drawing was prepared for equipment application only. The information contained herein is intended to aid in the installation of this system. No design changes have been made to the engineer of record's contract documents.

Dated: 10/28/24
Signed: *Tara Carroll*
Tara Carroll, ET Ohio #6387
NICET #: 142654
NICET LEVEL III
FIRE ALARM SYSTEMS

CENTRAL STATION LISTING
CCN File No. Vol. No.
UUFX S2684 20

REVISIONS		
NO.	DATE	REVISION
1	10/28/24 BY: DB	- FOR PERMIT
2	BY: ____	-
3	BY: ____	-
4	BY: ____	-
5	BY: ____	-
6	BY: ____	-

CODES ADOPTED BY LOCAL AHJ
2014 NEC
2015 IBC
2015 IFC
2013 NFPA 72

BUILDING INFORMATION	
OCCUPANCY TYPE = M/S-1	_____
TOTAL AREA = 14,887 SF (APPROX)	_____
ONE STORY	_____
FULLY SPRINKLERED	_____

PREPARED BY: D. BARRON
CHECKED BY: T. CARROLL
DATE: 10/28/2024
DESIGN REQUEST #: 98380
SALES AGREEMENT #: 891937147
JOB #: 300118734

TITLE: COVER SHEET
NOTES/LEGENDS
OPS MATRIX
RISER DIAGRAM

SHEET:

FA-0
1 of 3

SCOPE OF WORK

1. INSTALLATION OF A NEW POTTER SPRINKLER MONITORING SYSTEM TO REPLACE THE CURRENT SPRINKLER MONITORING SYSTEM LOCATED IN AN EXISTING COMMERCIAL BUSINESS SPACE.
2. PURPOSE OF THE INSTALLATION IS TO REPLACE OBSOLETE FIRE ALARM EQUIPMENT.
3. ALL SIGNALS TRANSMITTED VIA SOLE PATH CELL UNIT IN COMPLIANCE WITH NFPA 72.
4. ALL DEVICES TO BE TESTED IN COMPLIANCE WITH NFPA 72.

GENERAL NOTES

1. SOLE PATH CELLULAR COMMUNICATOR INSTALLATION AND SIGNAL VERIFICATION TO BE PERFORMED ACCORDING TO THE MANUFACTURERS INSTRUCTIONS.
2. SOLE PATH CELLULAR SIGNAL STRENGTH SHALL MEET MANUFACTURERS MINIMUM REQUIREMENTS.
3. ALL WORK PERFORMED IN THE FIELD SHALL BE ACCURATELY RECORDED AND AVAILABLE FOR FINAL INSPECTION.
4. SYSTEM HAS A SURVIVABILITY LEVEL OF 0 PER NFPA 72.
5. SYSTEM SHALL BE MONITORED BY UL LISTED CENTRAL STATION.

- MONITORING NOTES -

ADT COMMERCIAL
4221 W. JOHN CARPENTER FWY.
IRVING, TEXAS 75063

THE ALARM SERVICE COMPANY IS UL LISTED IN THE FOLLOWING CERTIFICATE SERVICE CATEGORIES:

FILE-VOL NO.	CCN	LISTING CATEGORY
S2684-20	UUFX	[SIGNAL AND FIRE ALARM EQUIPMENT AND SERVICES] (PROTECTIVE SIGNALING SERVICES) CENTRAL STATION
BP1790-3	CPVX	[BURGLAR ALARMS SYSTEMS] CENTRAL STATION
BP10566-1	CZRM	MONITORING STATIONS, NATIONAL INDUSTRIAL SECURITY

THIS CERTIFICATE EXPIRES ON 31-DEC-2024
IRVING, TX
ALARM SERVICE COMPANY: (567560) PARTY SITE NO: (567560)

- COMMUNICATOR NOTE -

STARLINK FIRE SELF-SUPERVISION
NFPA 72 REQUIRES THAT ANY FIRE COMMUNICATOR TROUBLE BE LOCALLY ANNUNCIATED BY THE FIRE PANEL WITHIN 200 SECONDS OF THE TROUBLE. THE TROUBLES INCLUDE LOSS OF SIGNAL, NOC SUPERVISION CHECKING FAILURE, ETC. THE STARLINK SLE-LTEV-FIRE FIRE COMMUNICATOR MODELS INCLUDE A "SELF-SUPERVISING FIRE COMMUNICATOR" FEATURE THAT ALLOWS THE COMMUNICATOR TO ANNUNCIATE A COMMUNICATION TROUBLE WITHOUT THE NEED FOR WIRING TO AN FACU ZONE INPUT OR ANY FACU REPROGRAMMING. THIS IS ACCOMPLISHED BY DROPPING THE EMULATED PHONE LINE VOLTAGE TO THE FACU SECONDARY PHONE LINE, CAUSING THE FACU TO ANNUNCIATE A COMMUNICATION TROUBLE. TO ENABLE SELF-SUPERVISION, SIMPLY REMOVE JUMPER JP2. NOTE THAT WHEN USING SELF-SUPERVISION, SOME FACUS MAY REQUIRE THE JUMPER J7 SHUNT TO BE REMOVED FOR THE PRIMARY PHONE LINE TO RESTORE CORRECTLY. TO ALSO REPORT A COMMUNICATOR TROUBLE TO THE CENTRAL STATION, ENABLE THE FEATURE "TYPING WIRING FAULT REPORT" IN THE ADVANCED TAB IN THE STARLINK NOC.

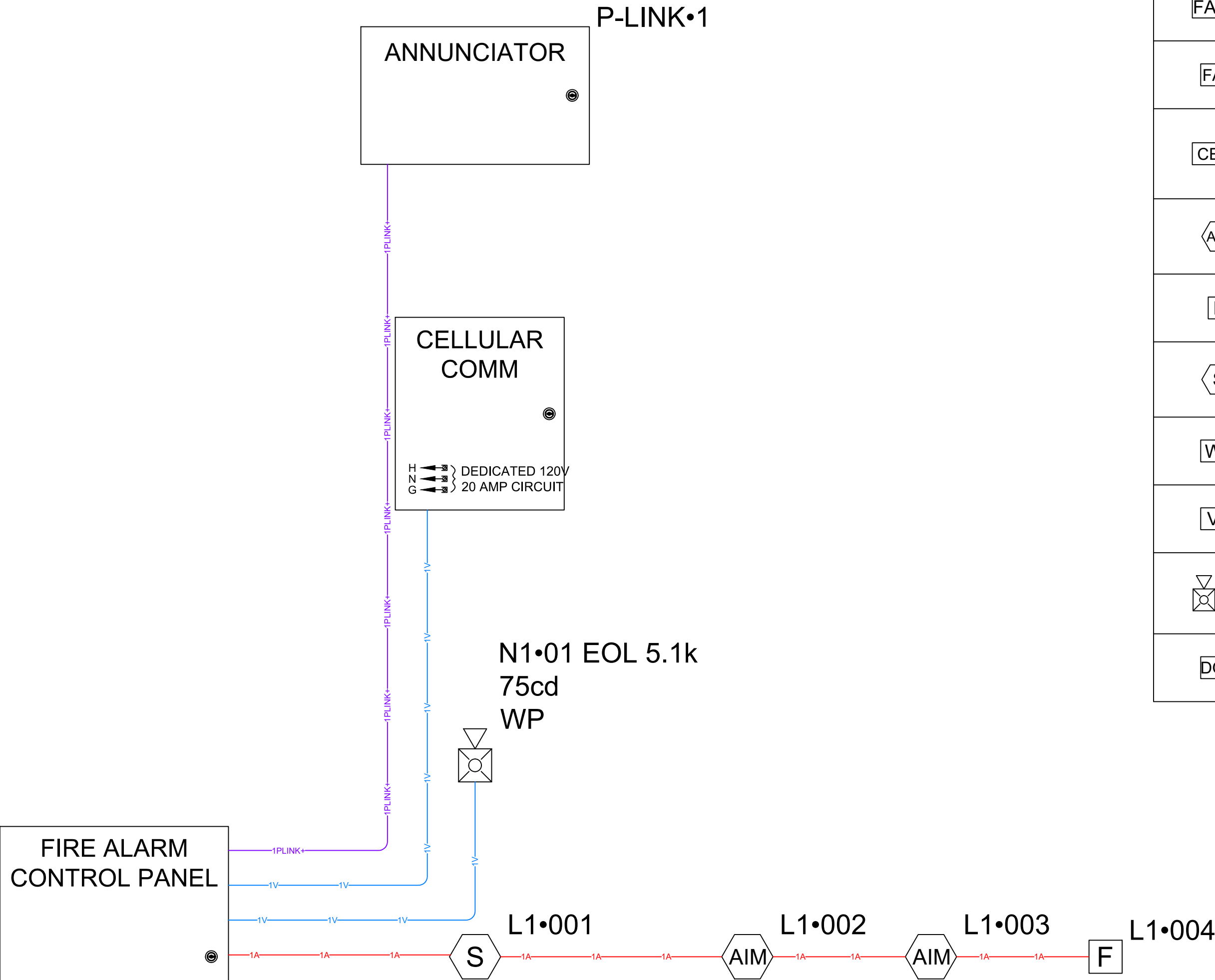
CABLE AND WIRE LEGEND

LABEL	PART NO	RESISTANCE MFT	AWG	DESCRIPTION
A	16/2 FPLR (SLC)	4.890	16	2 COND. SOLID COPPER FPLR ADDRESSABLE
PLINK+	18/4 FPLP/R (P-LINK/PWR)	7.770	18	4 COND. SOLID COPPER FPLP/R ANALOG UNSHIELDED
V	14/2 FPLP/R (NAC)	3.070	14	2 COND. SOLID COPPER FPLP/R ANALOG UNSHIELDED

DEVICE LEGEND

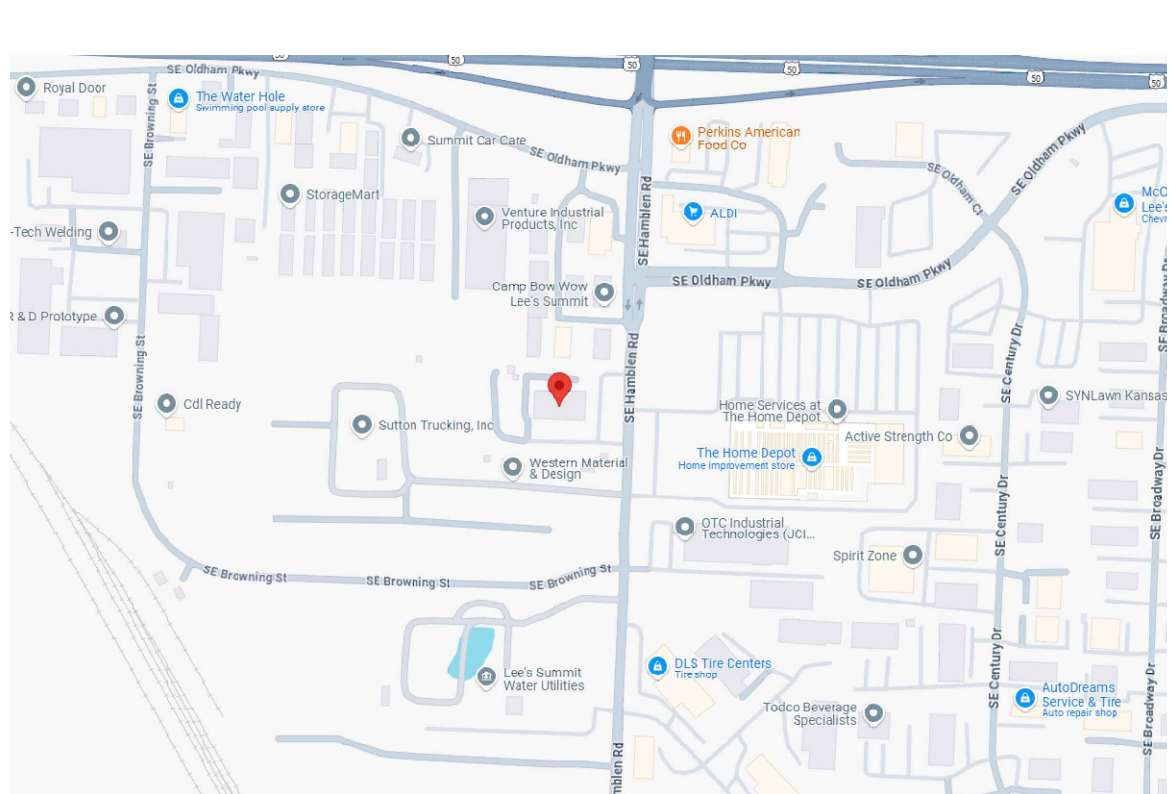
SYMBOL	QUANTITY	IS EXISTING	MANUFACTURER	PART NO	DESCRIPTION
	1	NEW	POTTER	AFC-100	FIRE ALARM CONTROL PANEL
	1	NEW	POTTER	RA-6500	160 CHARACTER LCD ANNUNCIATOR
	1	NEW	NAPCO	SLE-MAX2-CFBPS	UNIVERSAL FIRE COMMUNICATOR, DUAL SIM, DUAL PATH, DIRECT AC POWER 120VAC METAL HOUSING W/ PROVISION FOR PLUG-IN TRF12 XFORMER, 16VAC, 20VA (W/ PROVISION FOR BACKUP BATTERY)
	2	NEW	POTTER	PAD100-MIM	MICRO INPUT MODULE
	1	NEW	POTTER	PAD100-PSSA	ADDRESSABLE PULL STATION SINGLE ACTION
	1	NEW	POTTER	PAD200-PD	PHOTOELECTRIC SMOKE SENSOR
	1	EXISTING	GENERIC	WATERFLOW SWITCH	WATERFLOW SWITCH
	1	EXISTING	GENERIC	VALVE TAMPER SUPERVISORY SWITCH	VALVE TAMPER SUPERVISORY SWITCH
	1	NEW	POTTER	HS-24WR-WP	OUTDOOR HORN STROBE, FIXED 75 CANDELA, STANDARD ENCLOSURE, RED
	1	NEW	SPACE AGE ELECTRONICS	SSU00690	FIRE ALARM DOCUMENT CABINET W/8GB USB DRIVE (ACE-11), RED WITH CUSTOM LOGO

SYMBOL LEGEND



RISER DIAGRAM

SITE LOCATION



PANEL (AFC-100) BATTERY CALCULATION (SECONDARY POWER SOURCE REQUIREMENTS)											
PANEL COMPONENTS					STANDBY CURRENT		SECONDARY ALARM CURRENT				
					QTY	PART NO.	DESCRIPTION	CURRENT DRAW (A)	TOTAL (A)	CURRENT DRAW (A)	TOTAL (A)
					1	AFC-100	FIRE ALARM CONTROL PANEL	0.000	0.000	0.000	0.000
					1	AFC-100 MAIN BOARD	FIRE ALARM CONTROL PANEL MAIN BOARD	0.130	0.130	0.200	0.200
CIRCUIT	SYMBOL	QTY	PART NO	DESCRIPTION	CURRENT DRAW (A)	TOTAL (A)	CURRENT DRAW (A)	TOTAL (A)			
L1		2	PAD100-MIM	MICRO INPUT MODULE	0.0002	0.000	0.0002	0.000			
		1	PAD100-PSSA	ADDRESSABLE PULL STATION SINGLE ACTION	0.0002	0.000	0.0002	0.000			
		1	PAD200-PD	PHOTOELECTRIC SMOKE SENSOR	0.0003	0.000	0.0003	0.000			
N1	 WP	1	HS-24WR-WP	OUTDOOR HORN STROBE, FIXED 75 CANDELA, STANDARD ENCLOSURE, RED 75CD	0.000	0.000	0.168	0.168			
P-LINK		1	RA-6500	160 CHARACTER LCD ANNUNCIATOR	0.020	0.020	0.025	0.025			
					TOTAL STANDBY (A)	0.151	TOTAL ALARM (A)	0.394			
					REQUIRED STANDBY TIME (HOURS)		24				
					REQUIRED ALARM TIME (MINUTES)		5				
SECONDARY STANDBY LOAD (A)				0.151	24.000	3.622					
SECONDARY ALARM SUBTOTAL (A)				0.394	0.083	0.033					
STANDBY AND ALARM SUBTOTAL (AMP HOURS)						3.654					
DERATING FACTOR						1.250					
SECONDARY LOAD REQUIREMENTS (AMP HOURS)						4.568					
PROVIDE (2) 12V 8AH BATTERIES											
*BATTERY BOX SIZE CAPACITY NOT SPECIFIED. REFER TO MANUFACTURER DOCUMENTATION.											

PANEL (SLE-MAX2-CFBPS) BATTERY CALCULATION (SECONDARY POWER SOURCE REQUIREMENTS)											
					STANDBY CURRENT		SECONDARY ALARM CURRENT				
					CURRENT DRAW (A)	TOTAL (A)	CURRENT DRAW (A)	TOTAL (A)			
PANEL COMPONENTS					1	SLE-MAX2-CFBPS	UNIVERSAL FIRE COMMUNICATOR, DUAL SIM, DUAL PATH, DIRECT AC POWER 120VAC METAL HOUSING W/ PROVISION FOR PLUG-IN TRF12 XFORMER, 16VAC, 20VA (W/ PROVISION FOR BACKUP BATTERY)	0.000	0.000	0.000	0.000
					1	SLE-MAX2-CFBPS MAIN BOARD		0.200	0.200	0.200	0.200
CIRCUIT	SYMBOL	QTY	PART NO	DESCRIPTION	CURRENT DRAW (A)	TOTAL (A)	CURRENT DRAW (A)	TOTAL (A)			
					TOTAL STANDBY (A)	0.200	TOTAL ALARM (A)	0.200			
					REQUIRED STANDBY TIME (HOURS)		24				
					REQUIRED ALARM TIME (MINUTES)		5				
SECONDARY STANDBY LOAD (A)					0.200	24.000		4.800			
SECONDARY ALARM LOAD (A)					0.200	0.083		0.017			
STANDBY AND ALARM SUBTOTAL (AMP HOURS)							4.817				
DERATING FACTOR							1.250				
SECONDARY LOAD REQUIREMENTS (AMP HOURS)							6.021				
PROVIDE (1) 12V 7AH BATTERY											

BATTERY CALCULATIONS

N1 LUMP SUM REPORT				CIRCUIT SETTINGS		TOTALS		
				STARTING CALCULATION VOLTAGE:		20.400	MAX. VOLTAGE DROP:	0.04
							VOLTAGE DROP %:	0.21 %
				MIN. OPERATIONAL VOLTAGE:		16	END OF LINE VOLTAGE:	20.36
				MAX. CIRCUIT CURRENT (A):		3	TOTAL CIRCUIT CURRENT (A):	0.168
							SPARE CIRCUIT CURRENT (A):	2.832
							SPARE CIRCUIT CURRENT %:	94.40 %
				WIRE RESISTANCE (Ω/KFT):		3.070	TOTAL CIRCUIT LENGTH (FT):	41
TOTAL CIRCUIT RESISTANCE (Ω):	0.250754							
CIRCUIT WIRING PROPERTIES: 'V' 14/2 FPLP/R (NAC) 14 AWG, 2 COND. SOLID COPPER FPLP/R ANALOG UNSHIELDED								
DISTANCE MEASURED USING DRAWN SEGMENT LENGTHS WITH 10.00 % ADDITIONAL LENGTH CALCULATED								
SYMBOL	QUANTITY	PART NO	DESCRIPTION	CANDELAS	ALARM CURRENT (A)	TOTAL CURRENT (A)		
 WP	1	HS-24WR-WP	OUTDOOR HORN STROBE, FIXED 75 CANDELA, STANDARD ENCLOSURE, RED	75CD	0.168	0.168		
CALCULATION METHODS:								
TOTAL RESISTANCE (Ω) = WIRE RESISTANCE (Ω/FT) X 2 X TOTAL CIRCUIT LENGTH (FT)								
TOTAL VOLTAGE DROP = TOTAL RESISTANCE (Ω) X TOTAL CIRCUIT CURRENT (A)								

VOLTAGE DROP CALCULATIONS



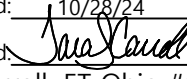
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CODES ADOPTED BY LOCAL AHJ

2014 NEC
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2013 NFPA 72

BUILDING INFORMATION

OCCUPANCY TYPE = M/S-1
TOTAL AREA = 14,887 SF (APPROX)

ONE STORY
FULLY SPRINKLERED

PREPARED BY: D. BARRON

CHECKED BY: T. CARROLL

DATE: 10/28/2024

DESIGN REQUEST #: 98380
SALES AGREEMENT #: 891937147
JOB #: 300118734

TITLE:

CALCULATIONS

SHEET:

FA-1

2 of 3

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UUFXX	S2684	20

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 ONE STORY
 FULLY-SPRINKLERED

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CHECKED BY: T. CARROLL

DATE: 10/28/2024

DESIGN REQUEST #: 98380

SALES AGREEMENT #: 891937147

JOB #: 300118734

TITLE:

FLOORPLAN

SHEET: FA-2

