SYMBOL LEGEND

SYMBOL	DESCRIPTION	MODEL #	QTY.	BACKBOX
FACP	FIRE ALARM CONTROL PANEL W/DACT & BATTERIES	ES-50X, IM-12120 (2)	1	PROVIDED
FAA	LCD REMOTE ANNUNCIATOR	ANN-80	1	4" SQUARE, 1-3/4" DEEP
FAC	FIRE ALARM CELLULAR COMMUNICATOR	SLE-MAX2-FIRE	1	PROVIDED
RPS	NAC POWER SUPPLY, 6 AMPS W/BATTERIES	PSN-64 IM-1272F1 (2)	1	PROVIDED
	PHOTOELECTRIC SMOKE SENSOR W/BASE	SD365	1	4" OCTAGON, 1-1/2" DEEP
F	MANUAL PULL STATION	BG-12LX	5	SINGLE GANG, 1-1/2" DEEP
AIM	MONITOR MODULE	MMF-300	8	4" SQUARE, 1-1/2" DEEP
	LED HORN STROBE, WALL MOUNT, WHITE	P2WLED	16	4" SQUARE, 1-1/2" DEEP
	LED STROBE, WALL MOUNT, WHITE	SWLED	3	4" SQUARE, 1-1/2" DEEP
ITVSS	120V PANEL SURGE PROTECTOR W/BREAKER LOCK	DTK-120HWLOK	1	N/A
	DENOTES NAC END-OF-LINE RESISTOR	N/A	N/A	N/A

FIRE ALARM SYSTEM NOTES

1. THE FIRE ALARM SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE STATE AND LOCAL CODES AND INCLUDING THE 2018 NC STATE BUILDING CODE AND THE 2013 EDITION OF NFPA 72.
2. REFER TO FLOOR PLANS FOR DEVICE TYPE AND LOCATION.
3. LABEL ALL DEVICES WITH ADDRESSES.
4. ALL CABLE TO BE FREE OF SHORTS, GROUNDS, AND OPENS.
5. ALL FIRE ALARM WIRING SHALL BE CLASS 'B' AS PER 2013 EDITION OF NFPA 72.
6. SMOKE DETECTORS SHOULD NOT BE LOCATED IN A DIRECT AIR FLOW NOR CLOSER THAN 3 FEET FROM AN AIR DIFFUSER.
7. THE OPERABLE PART OF A MANUAL PULL STATION SHALL NOT BE LESS THAN 42 INCHES AND NOT MORE THAN 48 INCHES FROM THE FINISHED FLOOR.
8. WALL MOUNTED VISIBLE APPLIANCES SHALL BE MOUNTED SUCH THAT THE ENTIRE LENS IS NOT LESS THAN 80 INCHES AND GREATER THAN 96 INCHES ABOVE THE FINISHED FLOOR.
9. ALL OPENINGS IN RATED ASSEMBLIES SHALL BE REPAIRED AS PER LOCAL BUILDING CODES.

WIRE LEGEND

SYMBOL	DESCRIPTION	WIRE TYPE/SIZE	COLOR
SLC	SIGNALING LINE CIRCUIT (SLC)	18/2 FPLP SOLID TWISTED PAIR, NO SHIELD	RED JACKET RED, BLACK
NACX	NOTIFICATION APPLIANCE CIRCUIT (NAC)	14/2 FPLP STRANDED	RED JACKET RED, BLACK
E	INITIATING DEVICE CIRCUIT (IDC)	14/2 FPLP STRANDED	RED JACKET RED, BLACK
H	ANNUNICATOR ANN-BUS CIRCUIT	16/2 FPLP SOLID TWISTED PAIR, NO SHIELD	RED JACKET RED, BLACK
J	ANNUNICATOR POWER CIRCUIT	14/2 FPLP STRANDED	RED JACKET RED, BLACK

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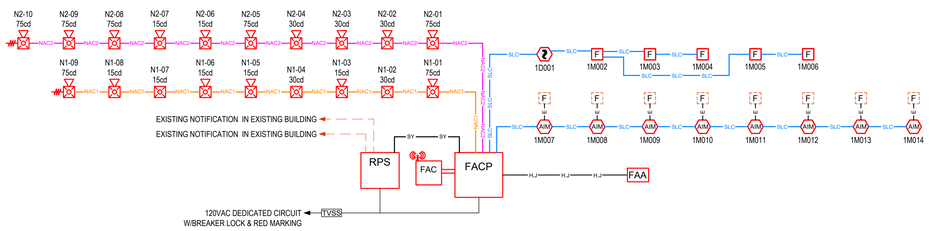
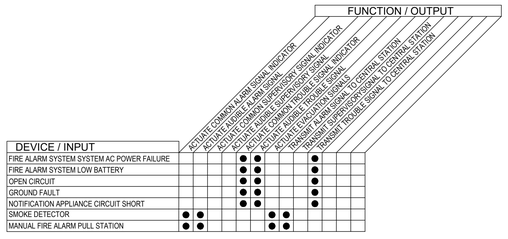
NO.	DATE	REVISION	BY

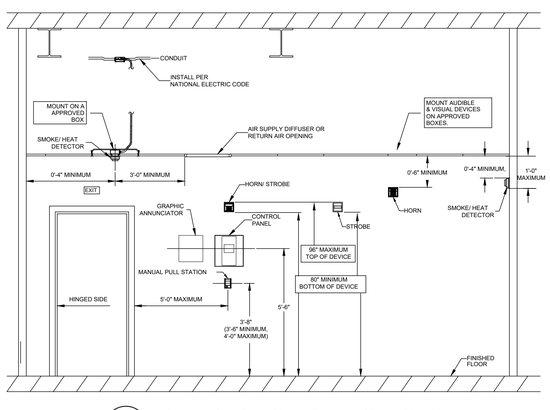


2 FA-1 FIRE ALARM RISER
Scale: None



3 FA-1 FIRE ALARM MATRIX
Scale: None

NFPA 72 & ADA DEVICE INSTALLATION REQUIREMENTS



4 FA-1 FIRE ALARM DEVICE MOUNTING HEIGHTS
Scale: None

FIRE-LITE ALARMS by Honeywell

Standby Battery Calculation
Firelite ES-50X Fire Alarm Control Panel

Protected Premises: Mt. Pisgah FWB Church **Date:** 9/8/2025
Address: 146 Prospect Church Road
City: Erwin **State:** NC **Zip:** 28339

Prepared By: WACO Fire Alarm, LLC **Phone:** (919) 772-1745
City: Raleigh **State:** NC

Panel ID: FACP **Location:** Ex. Building

System Device	Qty	Standby Current Draw: Draw	Standby Current Draw: Standby	Alarm Current Draw: Draw	Alarm Current Draw: Alarm
ES-50X	1	0.141000	0.141000	0.257000	0.257000
ANN-80 Remote Annunciator	1	0.015000	0.015000	0.040000	0.040000
IPDTS-CDM Communicator	1	0.040000	0.040000	0.041000	0.041000
SLE-MAX2-FIRE Cellular Communicator	1	0.085000	0.085000	0.325000	0.325000
SD365 Photo Detector	1	0.000200	0.000200	0.004500	0.004500
BG-12LX Manual Pull Station	5	0.000300	0.001500	0.005000	0.025000
MMF-300 Monitor Module	8	0.000375	0.003000	0.005000	0.040000
PSN-64 Trigger	1	0.000000	0.000000	0.020000	0.020000
P2WLED15	6	0.000000	0.000000	0.035000	0.000000
P2WLED30	3	0.000000	0.000000	0.038000	0.114000
P2WLED75	7	0.000000	0.000000	0.087000	0.000000
SWLED15	1	0.000000	0.000000	0.018000	0.000000
SWLED30	2	0.000000	0.000000	0.023000	0.000000
			Total Standby:	**0.286**	**Total Alarm:** **0.867**

Secondary Load Requirements 8.32 **Amp Hours**
Total Secondary Load from the calculation table below

Current Draw (Amps)	Time (Hours)	Total (AH)
Secondary Standby Load 0.286	Required Standby Time 24	6.86
Secondary Alarm Load 0.867	Required Alarm Time 0.084	0.07
	Total Secondary Load:	6.93
	Derating Factor	1.20
	Secondary Load Requirements	**8.32**

Battery Selection 12 **Amp Hours**

FACP STANDBY BATTERY CALCULATION

POTTER The Sensor Company

Standby Battery Calculation
PSN-64 NAC Power Supply

Protected Premises: Mt. Pisgah FWB Church **Date:** 9/8/2025
Address: 146 Prospect Church Road
City: Erwin **State:** NC **Zip:** 28339

Panel ID: RPS **Location:** By FACP

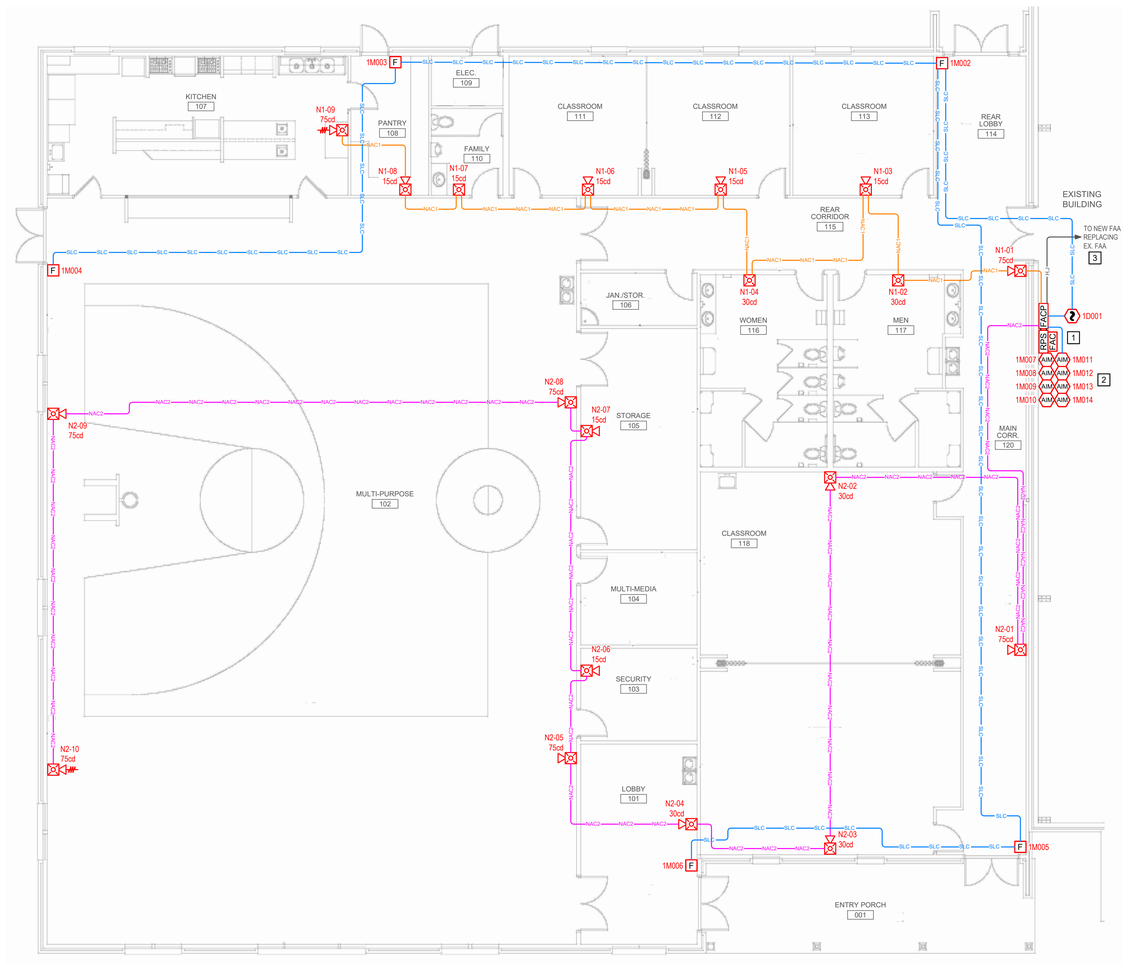
System Device	Qty	Standby Current Draw: Draw	Standby Current Draw: Standby	Alarm Current Draw: Draw	Alarm Current Draw: Alarm
PSN-64 Main Board	1	0.075000	0.075000	0.075000	0.075000
Maximum Current Draw	1	0.000000	0.000000	6.000000	6.000000
			Total Standby:	**0.075**	**Total Alarm:** **6.075**

Secondary Load Requirements 2.77 **Amp Hours**
Total Secondary Load from the calculation table below

Current Draw (Amps)	Time (Hours)	Total (AH)
Secondary Standby Load 0.075	Required Standby Time 24	1.80
Secondary Alarm Load 6.075	Required Alarm Time 0.084	0.51
	Total Secondary Load:	2.31
	Derating Factor	1.20
	Secondary Load Requirements	**2.77**

Battery Selection 7 **Amp Hours**

RPS STANDBY BATTERY CALCULATION



1 FA-1 FIRE ALARM PLAN
Scale: 1/8"=1'-0"

Point to Point Voltage Drop Analysis
Firelite ES-50X Fire Alarm Control Panel
Source Voltage: 20.4 Nominal System Voltage

Project Name: Mt. Pisgah FWB Church Activities Ctr **Date:** 9/8/2025
Circuit No: N1 **Minimum Voltage:** 16
Area Covered: Activities Center **Wire Gauge:** 14
Ohm's per 1,000 ft.: 3.14

Device Number	Part Number	Current (amps)	Distance (Feet): Between	Distance (Feet): Total	Voltage at Device
1	P2WLED75	0.087	30	30	20.33
2	SWLED30	0.022	35	65	20.27
3	P2WLED15	0.035	35	100	20.21
4	SWLED30	0.022	40	140	20.15
5	P2WLED15	0.035	30	170	20.11
6	P2WLED15	0.035	35	205	20.07
7	SWLED15	0.018	35	240	20.04
8	P2WLED15	0.035	30	270	20.02
9	P2WLED75	0.087	30	300	20.00
	Total Power:	**0.378**	**% Voltage Drop:**		**<1.96%**

NOTE: Wire resistance is doubled in the calculations for two wires. The voltage shown at the last device must not be lower than the manufacturer's listed minimum voltage. **Go**

Point to Point Voltage Drop Analysis
Firelite ES-50X Fire Alarm Control Panel
Source Voltage: 20.4 Nominal System Voltage

Project Name: Mt. Pisgah FWB Church Activities Ctr **Date:** 9/8/2025
Circuit No: N2 **Minimum Voltage:** 16
Area Covered: Activities Center **Wire Gauge:** 14
Ohm's per 1,000 ft.: 3.14

Device Number	Part Number	Current (amps)	Distance (Feet): Between	Distance (Feet): Total	Voltage at Device
1	P2WLED75	0.087	70	70	20.13
2	P2WLED30	0.038	60	130	19.93
3	P2WLED30	0.038	60	190	19.74
4	P2WLED30	0.038	35	225	19.64
5	P2WLED75	0.087	40	265	19.54
6	P2WLED15	0.035	30	295	19.47
7	P2WLED15	0.035	50	345	19.38
8	P2WLED75	0.087	25	370	19.34
9	P2WLED75	0.087	75	445	19.26
10	P2WLED75	0.087	60	505	19.23
	Total Power:	**0.619**	**% Voltage Drop:**		**<5.78%**

NOTE: Wire resistance is doubled in the calculations for two wires. The voltage shown at the last device must not be lower than the manufacturer's listed minimum voltage. **Go**

NAC VOLTAGE DROP CALCULATIONS

KEYED NOTES: #

1. REPLACE THE EXISTING CONVENTIONAL FIRE ALARM CONTROL PANEL WITH NEW ADDRESSABLE PANEL. REPLACE THE EXISTING CONVENTIONAL SMOKE DETECTOR WITH A NEW ADDRESSABLE DETECTOR. INSTALL NEW CELLULAR COMMUNICATOR TO REPORT TO UL LISTED CENTRAL STATION. COMMUNICATOR IS POWERED FROM THE FACP. INSTALL NEW NAC POWER SUPPLY. CONNECT THE EXISTING NOTIFICATION CIRCUITS TO THE NEW POWER SUPPLY.
2. MONITOR MODULES TO MONITOR THE EXISTING MANUAL PULL STATIONS IN THE EXISTING BUILDING.
3. INSTALL NEW REMOTE ANNUNCIATOR TO REPLACE THE EXISTING CONVENTIONAL ANNUNCIATOR AND CONNECT TO THE NEW FACP.

STATE OF NORTH CAROLINA
BOARD OF EXAMINERS OF ELECTICAL CONTRACTORS
Albemarle Alarm & Electronics
License Number SP.FA/LV.18041
Expiration Date: 09/30/2025
Vick Darrell Furr
Signature

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ALBEMARLE ALARM & ELECTRONICS
P.O. BOX 1337
ALBEMARLE, NC 28002
TEL: 704-983-1300
NC LICENSE # SP.FA/LV.18041
EXP. 09/30/2025

FIRE ALARM SYSTEM FOR:
MT. PISGAH FWB CHURCH ACTIVITIES CENTER
145 PROSPECT CHURCH ROAD
ERWIN, NC 28339

FIRE ALARM PLAN

DATE:	09/08/2025
DRAWN BY:	JRC
CHECKED BY:	VDF
SCALE:	1/8"=1'-0"

SHEET:
FA-1
SHEET 1 OF 1