

TIRE Warehouse

126 North Boyd St.
Portland, ME 04101



CONTRACTOR

Tire Warehouse
126 North Boyd St.
Portland, ME 04101

JOB NAME/ LOCATION

GENERAL NOTES

1. A DIGITAL ALARM COMMUNICATOR TRANSMITTER (DACT) NFPA 72 SEC 26.6.3.2.1. IF THE TRANSMITTER IS NOT LOCATED IN THE SAME ROOM AS THE TELCO EQUIPMENT BACKBOARD FIRE WIRE IS TO BE USED BETWEEN THE "D" MARK AND THE FIRE ALARM CONTROL PANEL EXCEPTION, IF CONDUIT IS PROVIDED FROM TELCO BACK BOARD TO TRANSMITTER LOCATION STANDARD I/O WIRE MAY BE USED.
2. DACTS MUST BE CONNECTED UPSTREAM OF ANY PRIVATE TELEPHONE SYSTEM AT THE PREMISES. CONNECTION MUST BE MADE AT LOOP START. TELEPHONE CIRCUIT.
3. FAILURE OF EITHER TELEPHONE LINES MUST BE ANNUNCIATED LOCALLY AND TRANSMITTED WITHIN FOUR MINUTES OVER THE SECOND LINE (SEC. 26.6.3.2.1.4)
4. IF LONG DISTANCE IS USED, THE SECOND NUMBER SHALL BE A DIFFERENT CARRIER, WHERE AVAILABLE (SEC. 26.6.3.2.1.5(7))
5. POWER LIMITED WIRING SHALL BE SEPARATED FROM NON-POWER LIMITED ELECTRIC LIGHT, AND CLASS 1 CIRCUITS. A MINIMUM OF 2 INCHES.
6. THE ELECTRICAL CONTRACTOR WILL PROVIDE A 120 V.A.C. 20 AMPS DEDICATED CIRCUIT TO LOCATION OF FIRE CONTROL PANEL/TRANSPONDER WITH A LOCK-ON TYP. C.B.
7. CONSULT WITH OWNER AND/OR GENERAL CONTRACTOR FOR EXACT LOCATION OF THE FIRE CONTROL PANEL/TRANSPONDER PRIOR TO INSTALLATION.
8. INSTALLER SHALL COORDINATE ALL WORK WITH THE OWNER & GENERAL CONTRACTOR AND ALL OTHER TRADES.

ADDITIONAL NOTES

1. ABOVE GROUND WATER SUPPLY DETECTOR CHECK TAMPER SHALL CAUSE A SUPERVISORY SIGNAL AT THE PANEL AND THE CENTRAL STATION.
2. FIRE CONTROL PANEL/DACT IS INHERENTLY POWER LIMITED AND SIGNALING AND CARRIER, WHERE AVAILABLE (SEC. 26.6.3.2.1.5(7))
3. A COMPLETE PRE-TEST PRINT OUT FROM THE CENTRAL STATION SHALL BE PRESENTED TO THE INSPECTING FIRE OFFICIAL PRIOR TO THE START OF THE INSPECTION.
4. CIRCUIT DISCONNECTING MEANS SHALL HAVE A RED MARKING. SHALL BE ACCESSIBLE ONLY TO AUTHORIZED PERSONNEL, AND SHALL BE IDENTIFIED AS "FIRE ALARM CIRCUIT". PER SECTION 10.6.5.2.1 - 10.6.5.2.4
5. LOOP RESISTANCE AND STRAY VOLTAGE TEST RESULTS WILL BE PROVIDED TO THE FIRE OFFICIAL UPON ALARM FINAL INSPECTION. THE RESULTS WILL BE ON COMPANY LETTERHEAD. WILL STATE THE TIME, LOCATION, SERIAL NUMBERS OF METER USED, CALIBRATION DOCUMENTATION, NAME OF TECHNICIAN, AND WILL BE "WET SIGNED" (IN ACCORDANCE WITH NFPA 72, 2013 CHAPTER 14).
6. A COPY OF THE RECORD OF COMPLETION SHALL BE PRESENTED TO THE FIRE DEPARTMENT OFFICIAL AND THE ORIGINAL SHALL STAY WITH THE SYSTEM.
7. MOUNTING OF ALL DEVICES TO COMPLY WITH NFPA 72. REFER TO MANUFACTURER'S CUT SHEETS FOR MORE INFORMATION ON THE DEVICES.
8. A SEPERATE CABINET / ENCLOSURE SHALL BE PROVIDED AND MARKED "FIRE ALARM DOCUMENTS" (FIRE ALARM / SPRINKLER MONITORING PLANS SHALL BE STORED IN THE ENCLOSURE). LOCATED NEAR FACP.
9. FIRE ALARM CONTROL PANEL SHALL BE LOCATED IN AN ENVIRONMENTALLY CONTROLLED, CLEAN & FREE OF DEBRIS ROOM. CONTROL PANEL FOR FIRE ALARM ONLY.
10. ALL WIRING AND CABLING METHODS WILL COMPLY WITH N.F.P.A. 70:760-28 STANDARDS. BY WAY OF PROTECTING ALL WIRING WITHIN 7 FEET FROM THE FINISHED FLOOR IN CONDUIT STUB-UP AND BY CONCEALING ALL WIRING IN WALLS, CEILING AND PROTECTIVE BUILDING ELEMENTS.
11. NO "T" TAPPING OF FIELD WIRING IS PERMISSIBLE IN SUPERVISED CIRCUITS, DATA CIRCUITS ARE EXCLUDED.

PROJECT INFORMATION

PROJECT INFORMATION:
 NAME OF PROJECT: Tire Warehouse
 ADDRESS: 126 North Boyd St.
 Portland, ME 04101
 PROPOSED USE: AUTO REPAIR
 FIRE ALARM INSTALLER:
 PROTECTION 1
 10 MANUEL DR., PORTLAND, ME 04103
 PHONE: 207-772-1171
 STATE LICENSE No. MC60018702
 FIRE ALARM VENDOR:
 PROTECTION 1
 4221 W JOHN CARPENTER FWY
 IRVING, TX 75067
 214-277-7111
 FIRE ALARM DESIGNER:
 BENJAMIN B. ALBAN, ET
 PROTECTION 1
 4221 W JOHN CARPENTER FWY
 IRVING, TX 75067
 CENTRAL STATION LISTING
 CCN File No. Vol. No.
 UUFX S2684 20
 NICET III # 106654 214-277-7111

CODE SUMMARY

- SCOPE OF WORK
THIS PROJECT INVOLVES THE INSTALLATION AND TESTING OF A NEW FIRE ALARM SYSTEM WITHIN A NEW STRUCTURE. THE SYSTEM SHALL BE MONITORED BY AN APPROVED LISTED CENTRAL STATION.
- APPLICABLE BUILDING CODES

BUILDING	2009 IBC	CODES	AMENDMENTS
FIRE	2009 IFC		
ELECTRICAL	2011 NFPA 70		
NFPA 72	2010 EDITION		
ACCESSIBILITY			
STATE			
OTHER			

- OCCUPANCY CLASSIFICATION B / S-1
- OCCUPANCY USE AUTO REPAIR

• GENERAL OCCUPANT LOAD OF AREAS

SALES	813	30 SF/PP	27
BUSINESS	3,247	100 SF/PP	33
STORAGE	2,234	300 SF/PP	8
TOTAL (SQ.FT.)	6,294		68

INDEX OF DRAWINGS

- FA-0 TITLE SHEET, GENERAL NOTES
- FA-1 FIRE ALARM LAYOUT
FIRE ALARM RISER DIAGRAM & SYSTEM CALCULATIONS

REVISIONS

No.	DESCRIPTION	DATE

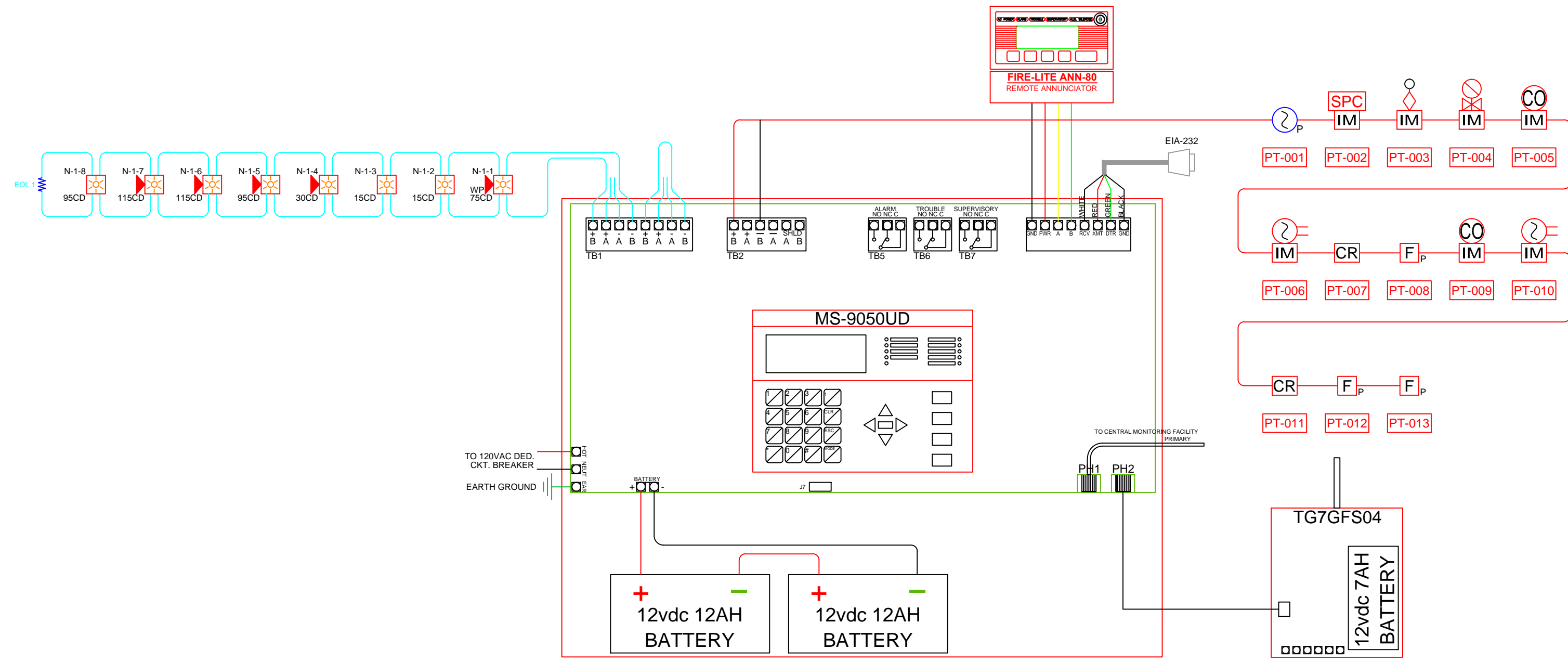
SCALE AS NOTED

JOB No.	DATE
T.B.O.	07.06.16
DRAWN BY	CHECKED BY
BENJAMIN B. ALBAN, ET	

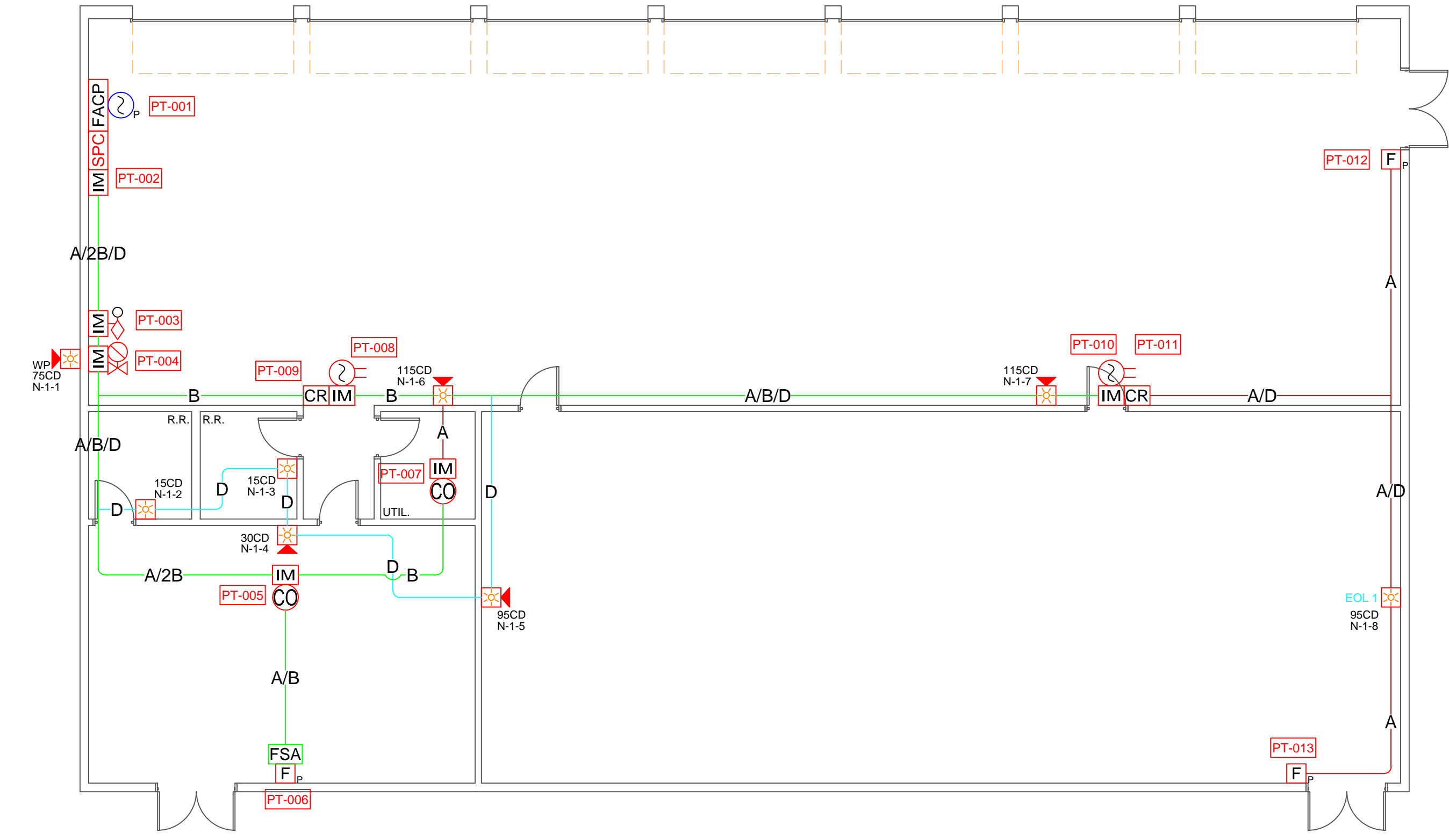
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SHEET TITLE
FIRE ALARM MONITORING SYSTEM TITLE SHEET

SHEET No.
FA - 0



1 SYSTEM RISER
SCALE: N.T.S. FA-1



2 FLOOR PLAN
SCALE: 1/8" = 1'-0" FA-1

Fire-Lite Fire Alarm Panel					
QUANTITY	Devices	STANDBY		ALARM	
		EACH	TOTAL	EACH	TOTAL
Fire Alarm Control Panel					
1	ANN-80 REMOTE LCD ANNUNCIATOR	0.015	0.015	0.040	0.040
1	MS-9050UD MAIN PANEL	0.120	0.120	0.200	0.200
0		0.000	0.000	0.000	0.000
		0.135	0.135	0.240	0.240
Addressable devices					
3	BG-12LX PULL STATION	0.000230	0.000690	0.000230	0.000690
2	CRF-300 RELAY MODULE	0.000230	0.000460	0.006500	0.013000
7	MMF-301 INPUT MODULE	0.000375	0.002625	0.000375	0.002625
1	SD-355 SMOKE DETECTOR	0.000300	0.000300	0.006500	0.006500
0		0.000000	0.000000	0.000000	0.000000
		0.004075	0.004075	0.022815	0.022815
Notification circuits (see additional sheet for circuit configuration)					
1	Circuit # 1	0.000	0.0000	1.0500	1.0500
1	Circuit # 2	0.084	0.0840	0.2600	0.2600
		0.084	0.084	1.310	1.310
Summary Section					
Standby Hrs. Required		60			
Alarm Sounding Minutes		15			
Total System Standby A/H		13.14			
Total System Alarm A/H		0.43			
Min. A/H Battery Required		13.57			
Recommended A/H Battery**		16.29 TOTAL BACKUP BATTERY PROVIDED: 12 Amp Hours			
Circuit 1					
Qty	Devices	Standby Current (Each)	Alarm Current (Each)	Standby Current (Total)	Alarm Current (Total)
2	44 SYS SEN SR WALL STROBE 15cd	0.000	0.066	0.000	0.132
1	25 SYS SEN P2R WALL HORN STROBE 30cd	0.000	0.107	0.000	0.107
2	29 SYS SEN P2R WALL HORN STROBE 115cd	0.000	0.218	0.000	0.436
1	27 SYS SEN P2R WALL HORN STROBE 95cd	0.000	0.194	0.000	0.194
1	47 SYS SEN SR WALL STROBE 95cd	0.000	0.181	0.000	0.181
1	54 SYS SEN P2RK WP WALL MOUNT 75cd	0.000	0.176	0.000	0.176
Totals:		0.000	1.226	0.000	1.226
Circuit 2					
Qty	Devices	Standby Current (Each)	Alarm Current (Each)	Standby Current (Total)	Alarm Current (Total)
2	11 SYSTEM SENSOR D4120 DUCT SMOKE DETECTOR	0.021	0.065	0.042	0.130
2	12 SYSTEM SENSOR CA1224T CO DETECTOR	0.000	0.005	0.000	0.010
0	10 Unused	0.000	0.000	0.000	0.000
Totals:		0.021	0.070	0.042	0.140

4 PANEL BATTERY CALC
SCALE: N.T.S. FA-1

FIRE-LITE MS-9050UD FIRE ALARM CONTROL PANEL									
UL derated					Project: TIRE WAREHOUSE				
Rev. 11-20-16 MJM					Date: 07.06.16				
Edit Devices					Prepared By: BBA				
FACP NAC CKTS (1-2)									
Circuit # 1	Total Device Standby A/H	Total Device Alarm A/H	Wire AWG & Type	OHMS 1000 Ft.	Length (Feet)	Actual OHMS	Volts @ EOL	Voltage Drop %	
Circuit # 2	0.135	0.240	#14AWG Solid	3.19	200	1.28	18.84	7.67%	
MS-9050UD	0.135	0.240	#16AWG Solid	8.06	200	3.23	19.56	4.12%	
Total Current		0.219	1.726						
Summary Section									
Standby Hrs. Required		60							
Alarm Sounding Minutes		15							
Total System Standby A/H		13.14							
Total System Alarm A/H		0.43							
Min. A/H Battery Required		13.57							
Recommended A/H Battery**		16.29 TOTAL BACKUP BATTERY PROVIDED: 12 Amp Hours							
Circuit 1									
Qty	Devices	Standby Current (Each)	Alarm Current (Each)	Standby Current (Total)	Alarm Current (Total)				
2	44 SYS SEN SR WALL STROBE 15cd	0.000	0.066	0.000	0.132				
1	25 SYS SEN P2R WALL HORN STROBE 30cd	0.000	0.107	0.000	0.107				
2	29 SYS SEN P2R WALL HORN STROBE 115cd	0.000	0.218	0.000	0.436				
1	27 SYS SEN P2R WALL HORN STROBE 95cd	0.000	0.194	0.000	0.194				
1	47 SYS SEN SR WALL STROBE 95cd	0.000	0.181	0.000	0.181				
1	54 SYS SEN P2RK WP WALL MOUNT 75cd	0.000	0.176	0.000	0.176				
Totals:		0.000	1.226	0.000	1.226				
Circuit 2									
Qty	Devices	Standby Current (Each)	Alarm Current (Each)	Standby Current (Total)	Alarm Current (Total)				
2	11 SYSTEM SENSOR D4120 DUCT SMOKE DETECTOR	0.021	0.065	0.042	0.130				
2	12 SYSTEM SENSOR CA1224T CO DETECTOR	0.000	0.005	0.000	0.010				
0	10 Unused	0.000	0.000	0.000	0.000				
Totals:		0.021	0.070	0.042	0.140				

5 FACP NAC CKTS VDC
SCALE: N.T.S. FA-1

TELGUARD CELLULAR DIALER					
QUANTITY	Devices	STANDBY		ALARM	
		EACH	TOTAL	EACH	TOTAL
1	TG7GFS04 CELLULAR DIALER	0.060	0.060	0.250	0.250
0		0.000	0.000	0.000	0.000
		0.060	0.060	0.250	0.250
CELLULAR DIALER					
Total stand by current		0.06000			
X Stand by hours		24			
Stand by amp/hours		1.44			
Total Alarm Current					
X alarm Minutes (5)/60		0.25			
Alarm Total amp/hours		0.02			
Total Amp/hours					
X Derating factor of 20%		1.46			
Minimum Battery Size		1.75			
Battery Selected		7 AMP HOUR			

6 DIALER BATTERY CALC
SCALE: N.T.S. FA-1

FIRE ALARM EQUIPMENT LIST				
SYMBOL	MFG.	QTY	PART NO.	DESCRIPTION
FACP	FIRELITE	1	MS-9050UD	FIRE ALARM CONTROL PANEL
SPC	UNIVERSAL POWER	2	UB12120	12AH 12V SEALED LEAD ACID BATTERY
CR	TELGUARD	1	TG7GFS04	BACK-UP CELL COMMUNICATOR
IM	ULTRA-TEC	1	1270	7AH 12V SEALED LEAD ACID BATTERY
F	FIRELITE	2	CRF-300	ADDRESSABLE RELAY MODULE
IM	FIRELITE	7	MMF-300	ADDRESSABLE MONITOR MODULE
F	FIRELITE	3	BG-12LX	ADDRESSABLE MANUAL PULL STATION
SD	FIRELITE	1	SD-355	ADDRESSABLE SMOKE DETECTOR
RTS	SYSTEM SENSOR	2	RTS-151KEY	REMOTE TEST SWITCH
PZR	SYSTEM SENSOR	4	PZR	INTERIOR HORN/STROBE, RED
P2RK	SYSTEM SENSOR	1	P2RK (WP)	EXTERIOR HORN/STROBE, RED
SR	SYSTEM SENSOR	3	SR	INTERIOR STROBE, RED
CO	SYSTEM SENSOR	2	CO1224T	CARBON MONOXIDE DETECTOR
A	HONEYWELL	LOT	4506	2 COND 18AWG FPLP NON SHIELDED WIRE SIGNALING LINE CIRCUITS (CLASS B, STYLE 4.0)
B	HONEYWELL	LOT	4507	4 COND 18AWG FPLP NON SHIELDED WIRE COMMUNICATION CIRCUITS (CLASS 'B')
D	HONEYWELL	LOT	4513	2 COND 14AWG FPLP WIRE NOTIFICATION CIRCUITS (CLASS 'B')
TO BE PROVIDED BY OTHERS				
POTTER	POTTER	1	VSF-R	WATERFLOW (P.B.O.)
POTTER	POTTER	1	RBVS-1	SUPERVISORY SWITCH (B-FLY) (P.B.O.)
D4120	SYSTEM SENSOR	2	D4120	PHOTOELECTRIC DUCT SMOKE DETECTOR

7 SYMBOL LEGEND
SCALE: N.T.S. FA-1

ZONES REPORTING TO CENTRAL STATION					
ZONES	DEVICE	REPORTING SIGNAL			LOCATION
		ALARM	SUPR.	TRBL.	
PT-001	SMOKE DETECTOR	XX			AT F.A.C.P.
PT-002	TROUBLE CONTACTS			XX	AT CELLULAR UNIT
PT-003	WATERFLOW	XX			AT RISER
PT-004	B-FLY		XX		AT RISER
PT-005	CARBON MONOXIDE DETECTOR		XX		SALES
PT-006	MANUAL PULL STATION	XX			SALES
PT-007	CARBON MONOXIDE DETECTOR		XX		UTILITY
PT-008	DUCT SMOKE DETECTOR		XX		RTU #1
PT-009	RTU SHUTDOWN RELAY			XX	RTU #1
PT-010	DUCT SMOKE DETECTOR		XX		RTU #2
PT-011	RTU SHUTDOWN RELAY			XX	RTU #2
PT-012	MANUAL PULL STATION	XX			REPAIR AREA
PT-013	MANUAL PULL STATION	XX			TIRE STORAGE
	PANEL		XX		

9 ANNUNCIATION SCHEDULE
SCALE: N.T.S. FA-1

SYSTEM INPUTS	SYSTEM OUTPUTS												
	CONTROL UNIT ANNUNCIATION				NOTIFICATION				REQUIRED FIRE SAFETY CONTROL				
	A	B	C	D	E	F	G	H	I	J	K	L	M
1 FIRE ALARM AC POWER FAILURE													
2 FIRE ALARM SYSTEM LOW BATTERY													
3 GROUND FAULT													
4 NOTIFICATION APPLIANCE CIRCUIT SHORT													
5 OPEN CIRCUIT													
6 IN-DUCT SMOKE DETECTORS													
7 MANUAL PULL STATION													
8 SMOKE DETECTORS													
9 WATERFLOW													
10 SPRINKLER CONTROL VALVE													
11 CARBON MONOXIDE DETECTORS													
12													

10 SYSTEM MATRIX
SCALE: N.T.S. FA-1

REVISIONS

No.	DESCRIPTION	DATE

SCALE	AS NOTED
JOB No.	DATE
T.B.O.	07.06.16
DRAWN BY	CHECKED BY
BENJAMIN B. ALBAN, CET	

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SHEET TITLE
FIRE ALARM MONITORING SYSTEM FLOOR PLAN

SHEET No.
FA - 1