

FIRE ALARM PLAN NOTES

120VAC (BY OTHERS)

DRAWING INDEX

- FA.0.01 COVER SHEET
FA.1.01 FIRE ALARM FLOOR PLAN
FA.5.01 RCP – FOR REFERENCE ONLY
FA.6.01 PROJECT CALCULATIONS & LINE DIAGRAM

APPLICABLE CODES

NFPA 70 – NATIONAL ELECTRIC CODE (2017)
NFPA 72 – NATIONAL FIRE ALARM & SIGNALING CODE (2016)
NFPA 101 – LIFE SAFETY CODE (2018)
INTERNATIONAL FIRE CODE – 2018
INTERNATIONAL BUILDING CODE – 2018
CONSTRUCTION: II–B. OCCUPANCY: A–2. OCCUPANT LOAD: 290 INTERIOR.

SCOPE OF WORK:

AFP TO INSTALL NEW POWER SUPPLY AND NOTIFICATION FOR
TENANT IMPROVEMENT. AFP TO ADD TWO NEW PULL STATIONS,
AND MONITOR TWO KITCHEN HOOD SYSTEMS. REMAINDER OF
SYSTEM IS EXISTING TO REMAIN.
SYSTEM MONITORED BY A REMOTE SUPERVISING STATION
PER NFPA 72 26.5 (2016) BY OTHERS.

ABBREVIATIONS:

WP = WEATHER RESISTANT. ETR = EXISTING TO REMAIN.
ROR = RATE OF RISE. RCP = REFLECTED CEILING PLAN.
ER = EXISTING TO BE RELOCATED. SHOWN IN NEW LOCATION.
NIC = NOT IN CONSTRUCTION. TI = TENANT IMPROVEMENT.

FIRE ALARM SYMBOLS		
ICON	DESCRIPTION	MOUNTING REQUIREMENTS
	FIRE ALARM CONTROL PANEL	SURFACE MOUNTED ENCLOSURE PROVIDED, TOP 72" AFF; CONDUIT TO CEILING
	FIRE ALARM REMOTE ANNUNCIATOR	4" SQUARE, 1-1/2" STANDARD BOX, W/ SINGLE MUD RING; 60" AFF, CONDUIT TO CEILING
	CELLULAR COMMUNICATOR	SURFACE MOUNTED ENCLOSURE PROVIDED, TOP 72" AFF; CONDUIT TO FACP
	XX AMP POWER SUPPLY PANEL	SURFACE MOUNTED ENCLOSURE PROVIDED, TOP 72" AFF; CONDUIT TO CEILING
	PHOTO SMOKE DETECTOR	4" SQUARE, 1-1/2" STANDARD BOX W/ SINGLE MUD RING; NO HIGHER THAN 30" AFF
	THERMAL DETECTOR	4" SQUARE, 1-1/2" STANDARD BOX W/ SINGLE MUD RING; NO HIGHER THAN 30" AFF
	PHOTO SMOKE DUCT DETECTOR	INSTALL PER MANUFACTURER SPECIFICATIONS
	MANUAL PULL STATION	4" SQUARE, 1-1/2" STANDARD BOX W/ SINGLE MUD RING; 48" AFF & 5" FROM DOOR; CONDUIT TO CEILING
	SINGLE MONITOR MODULE	4" SQUARE, 2-1/8" DEEP BOX; CONDUIT TO CEILING
	DUAL MONITOR MODULE	4" SQUARE, 2-1/8" DEEP BOX; CONDUIT TO CEILING
	DUAL RELAY MODULE	4" SQUARE, 2-1/8" DEEP BOX; CONDUIT TO CEILING
	ALARM STROBE, CANDELA SHOWN	WALL MOUNTED, 80"-96" AFF OR (C) = CEILING MOUNTED; 4" SQUARE, 1-1/2" STANDARD BOX W/ SINGLE MUD RING
	ALARM H/S, CANDELA SHOWN	WALL MOUNTED, 80"-96" AFF OR (C) = CEILING MOUNTED; 4" SQUARE, 1-1/2" STANDARD BOX W/ SINGLE MUD RING
	END OF LINE RESISTOR PROVIDED BY CONTROL/DEVICE	INSTALL AT THE LAST DEVICE OF THAT CIRCUIT
	SPRINKLER FLOW SWITCH BY OTHERS	HANDY BOX INSTALLED ON SWITCH; THEN INSTALL 1/2" FLEX CONDUIT TO 4" SQUARE, 2-1/8" DEEP BOX ON WALL
	SPRINKLER TAMPER SWITCH BY OTHERS	HANDY BOX INSTALLED ON SWITCH; THEN INSTALL 1/2" FLEX CONDUIT TO 4" SQUARE, 2-1/8" DEEP BOX ON WALL
	POST INDICATOR VALVE BY OTHERS	1/2" WATER TIGHT FLEX CONDUIT FROM SWITCH TO WEATHERPROOF SINGLE GANG BOX ON U.G. CONDUIT
	KITCHEN HOOD SUPPRESSION SYSTEM - BY OTHERS	4" SQUARE, 2-1/8" DEEP BOX; CONDUIT TO CEILING
	EXISTING 24VDC MAGNETIC LOCK WITH SPST POWERED RELAY	DOOR FRAME MOUNTED, OPPOSITE OF DOOR SWING
	JUNCTION OF FIRE ALARM CABLES	4" SQUARE, 2-1/8" DEEP BOX, BLANK COVER; CONDUIT TO CEILING

NOTE: NOT ALL SYMBOLS APPLY TO CURRENT PROJECT

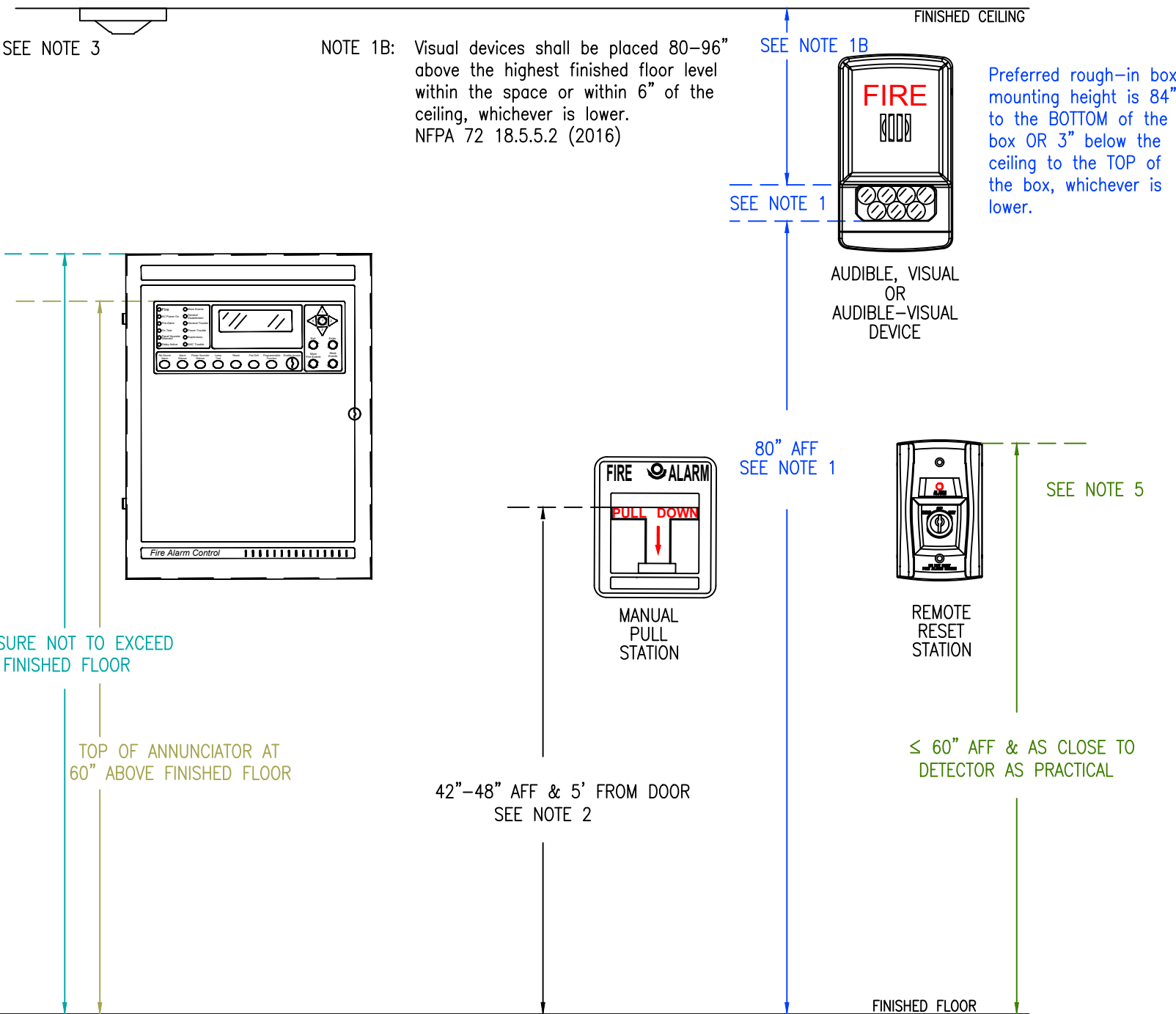
SEQUENCE OF OPERATION MATRIX									
	ALARM AT FACP	TRouble AT FACP	SUPERVISORY AT FACP	NOT IN CONSTRUCTION	WALL MOUNTED ANNUNCIATOR	WALL / RTU SHUTDOWN	SHALL SENT TO OFF-SITE MONITORING	ELEVATOR RECALL	ELEVATOR EQUIPMENT SHUNT TRIP
FIRE ALARM INPUTS									
1	MANUAL PULL STATION	X		X	X				
2	WATER FLOW	X	X	X	X				
3	SMOKE DETECTOR	X		X	X				
4	HEAT DETECTOR	X	X	X	X				
5	ELEVATOR LOBBY SMOKE(S)	X	X	X	X	X			
6	ELEVATOR EQUIPMENT ROOM SMOKE	X	X	X	X	X			
7	ELEVATOR EQUIPMENT ROOM HEAT	X	X	X	X	X			X
8	ELEVATOR SHAFT HEAT	X	X	X	X	X			X
9	ELEVATOR SHAFT SMOKE	X	X	X	X	X			X
10	KITCHEN HOOD / ANSUL	X		X	X				
SUPERVISORY ALARM INPUTS									
1	DUST DETECTOR			X		X	X		
2	TAMPER SWITCH			X		X	X		
3	CARBON MONOXIDE DETECTOR			X		X			
TROUBLE CONDITIONS									
1	OPEN CIRCUIT		X					X	
2	SHORT CIRCUIT		X					X	
3	GROUND FAULT		X					X	
4	BAD DEVICE, DIRTY DEVICE, NO ANSWER		X					X	
5	LOW BATTERY		X					X	
6	MAIN POWER FAIL		X					X	

NOTE: NOT ALL CONDITIONS APPLY TO CURRENT PROJECT.

FUNCTIONAL MATRIX

ALLIANCE FIRE PROTECTION
FIRE ALARM SYSTEM

STREETS OF WEST PRYOR
30HOP - TI
LEE'S SUMMIT, MO



RECOMMENDED MOUNTING DETAIL
NOT TO SCALE

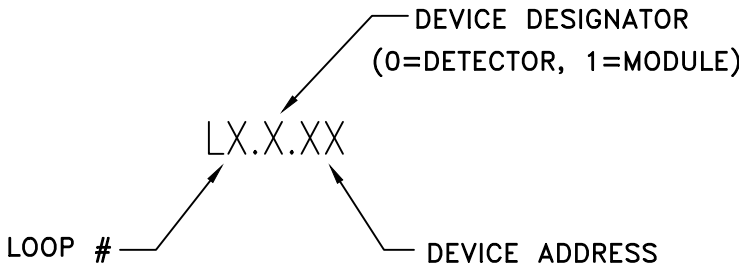
FIRE ALARM GENERAL NOTES

- WALL MOUNTED APPLIANCES SHALL BE MOUNTED SUCH THAT THE ENTIRE LENS IS NOT LESS 80" AND NOT GREATER THAN 96" ABOVE THE FINISHED FLOOR.
NFPA 72 18.5.5.1 (2016)
- MANUAL FIRE ALARM BOXES SHALL BE LOCATED WITHIN 5' OF EXIT DOORWAY.
NFPA 72 17.14.8.4 (2016)
–THE OPERABLE PART OF A MANUALLY ACTUATED ALARM INITIATING DEVICE SHALL BE NOT LESS THAN 42" AND NOT MORE THAN 48" FROM THE FINISHED FLOOR.
NFPA 72 17.14.5 (2016)
- IF THE INTENT IS TO INITIATE ACTION WHEN SMOKE/FIRE THREATENS A SPECIFIC OBJECT, THE DETECTOR SHALL BE PERMITTED TO BE INSTALLED IN CLOSE PROXIMITY TO THAT OBJECT.
NFPA 72 17.4.8 (2016)
A: IN HIGH–CEILING AREAS, DETECTION SHOULD BE PLACED ON THE WALL ABOVE AND WITHIN 60" OF THE PROTECTED ITEM.
NFPA 72 A17.4.8 (2016)
- ALL WIRING IN OPEN CEILING TO BE RUN PARALLEL AND PERPENDICULAR TO BUILDING STRUCTURE.
WIRING SHOULD BE CONCEALED FROM VIEW AS BEST POSSIBLE.
- WHERE DUCT SMOKE DETECTORS ARE NOT RESETTABLE FROM THE PROTECTED PREMISES FIRE ALARM SYSTEM, A LISTED ALARM/ SUPERVISORY INDICATOR WITH INTEGRAL RESET SWITCH SHALL BE PROVIDED IN AN ACCESSIBLE LOCATION.
NFPA 72 23.8.5.4.6.4 (2016)

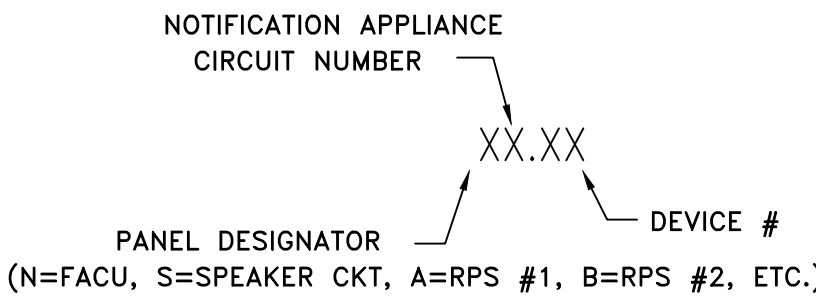
WIRING LEGEND

- 18/2 NON SHIELDED (PLENUM RATED) SLC
- 16/2 NON SHIELDED (PLENUM RATED) NAC/STROBE
- 16/2 NON SHIELDED (PLENUM RATED) 24VDC
- 18/4 NON SHIELDED (PLENUM RATED) ANNUNCIATOR/RTS

SIGNAL LINE CIRCUIT
DEVICE ADDRESS KEY



NOTIFICATION DEVICE ADDRESS KEY



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written permission.

City of Lee's Summit
Designer NICET Level III
TROY KOEHN
Scale
N/A
Job Number
35650913
Date
07/25/2024
Description
FIRE ALARM
System Type
NOTIFIER / NFW–50XGV

Revisions

AHJ STAMP

Design Professional of Record
08/14/2024

Alliance
FIRE PROTECTION
130 W 9th Ave. Suite 101
North Kansas City, MO 64116
PH: 913-888-0647 FAX: 913-888-0618

STREETS OF WEST PRYOR
FIRE ALARM – TI 30HOP
1020 NORTHWEST PRYOR ROAD
LEE'S SUMMIT, MO 64081
COVER PAGE

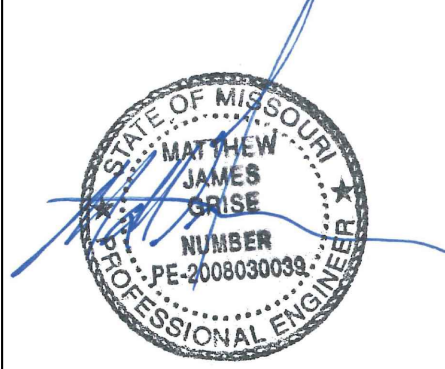
Sheet Number
FA.0.01

CITY OF LEE'S SUMMIT	
Designer NICET Level III	
TROY KOEHN	
Scale	
1/8" = 1'-0"	
Job Number	
35650913	
Date	
07/25/2024	
Description	
FIRE ALARM	
System Type	
NOTIFIER / NFW-50XGV	

Revisions

the 1990s, the number of people in the United States who are 65 years of age or older has increased by 50 percent, and the number of people 75 years of age or older has increased by 75 percent. The number of people 85 years of age or older has increased by 150 percent. The number of people 95 years of age or older has increased by 300 percent. The number of people 100 years of age or older has increased by 500 percent. The number of people 105 years of age or older has increased by 1,000 percent. The number of people 110 years of age or older has increased by 2,000 percent. The number of people 115 years of age or older has increased by 4,000 percent. The number of people 120 years of age or older has increased by 8,000 percent. The number of people 125 years of age or older has increased by 16,000 percent. The number of people 130 years of age or older has increased by 32,000 percent. The number of people 135 years of age or older has increased by 64,000 percent. The number of people 140 years of age or older has increased by 128,000 percent. The number of people 145 years of age or older has increased by 256,000 percent. The number of people 150 years of age or older has increased by 512,000 percent. The number of people 155 years of age or older has increased by 1,024,000 percent. The number of people 160 years of age or older has increased by 2,048,000 percent. The number of people 165 years of age or older has increased by 4,096,000 percent. The number of people 170 years of age or older has increased by 8,192,000 percent. The number of people 175 years of age or older has increased by 16,384,000 percent. The number of people 180 years of age or older has increased by 32,768,000 percent. The number of people 185 years of age or older has increased by 65,536,000 percent. The number of people 190 years of age or older has increased by 131,072,000 percent. The number of people 195 years of age or older has increased by 262,144,000 percent. The number of people 200 years of age or older has increased by 524,288,000 percent. The number of people 205 years of age or older has increased by 1,048,576,000 percent. The number of people 210 years of age or older has increased by 2,097,152,000 percent. The number of people 215 years of age or older has increased by 4,194,304,000 percent. The number of people 220 years of age or older has increased by 8,388,608,000 percent. The number of people 225 years of age or older has increased by 16,777,216,000 percent. The number of people 230 years of age or older has increased by 33,554,432,000 percent. The number of people 235 years of age or older has increased by 67,108,864,000 percent. The number of people 240 years of age or older has increased by 134,217,728,000 percent. The number of people 245 years of age or older has increased by 268,435,456,000 percent. The number of people 250 years of age or older has increased by 536,870,912,000 percent. The number of people 255 years of age or older has increased by 1,073,741,824,000 percent. The number of people 260 years of age or older has increased by 2,147,483,648,000 percent. The number of people 265 years of age or older has increased by 4,294,967,296,000 percent. The number of people 270 years of age or older has increased by 8,589,934,592,000 percent. The number of people 275 years of age or older has increased by 17,179,869,184,000 percent. The number of people 280 years of age or older has increased by 34,359,738,368,000 percent. The number of people 285 years of age or older has increased by 68,719,476,736,000 percent. The number of people 290 years of age or older has increased by 137,438,953,472,000 percent. The number of people 295 years of age or older has increased by 274,877,906,944,000 percent. The number of people 300 years of age or older has increased by 549,755,813,888,000 percent. The number of people 305 years of age or older has increased by 1,099,511,627,776,000 percent. The number of people 310 years of age or older has increased by 2,199,023,255,552,000 percent. The number of people 315 years of age or older has increased by 4,398,046,511,104,000 percent. The number of people 320 years of age or older has increased by 8,796,093,022,208,000 percent. The number of people 325 years of age or older has increased by 17,592,186,044,416,000 percent. The number of people 330 years of age or older has increased by 35,184,372,088,832,000 percent. The number of people 335 years of age or older has increased by 70,368,744,177,664,000 percent. The number of people 340 years of age or older has increased by 140,737,488,355,328,000 percent. The number of people 345 years of age or older has increased by 281,474,976,710,656,000 percent. The number of people 350 years of age or older has increased by 562,949,953,421,312,000 percent. The number of people 355 years of age or older has increased by 1,125,899,906,842,624,000 percent. The number of people 360 years of age or older has increased by 2,251,799,813,685,248,000 percent. The number of people 365 years of age or older has increased by 4,503,599,627,370,496,000 percent. The number of people 370 years of age or older has increased by 9,007,199,254,740,992,000 percent. The number of people 375 years of age or older has increased by 18,014,398,509,481,984,000 percent. The number of people 380 years of age or older has increased by 36,028,797,018,963,968,000 percent. The number of people 385 years of age or older has increased by 72,057,594,037,927,936,000 percent. The number of people 390 years of age or older has increased by 144,115,188,075,855,872,000 percent. The number of people 395 years of age or older has increased by 288,230,376,151,711,744,000 percent. The number of people 400 years of age or older has increased by 576,460,752,303,423,488,000 percent. The number of people 405 years of age or older has increased by 1,152,921,504,606,846,976,000 percent. The number of people 410 years of age or older has increased by 2,305,843,009,213,693,952,000 percent. The number of people 415 years of age or older has increased by 4,611,686,018,427,387,904,000 percent. The number of people 420 years of age or older has increased by 9,223,372,036,854,775,808,000 percent. The number of people 425 years of age or older has increased by 18,446,744,073,709,551,616,000 percent. The number of people 430 years of age or older has increased by 36,893,488,147,419,103,232,000 percent. The number of people 435 years of age or older has increased by 73,786,976,294,838,206,464,000 percent. The number of people 440 years of age or older has increased by 147,573,952,589,676,412,928,000 percent. The number of people 445 years of age or older has increased by 295,147,905,179,352,825,856,000 percent. The number of people 450 years of age or older has increased by 590,295,810,358,705,651,712,000 percent. The number of people 455 years of age or older has increased by 1,180,591,620,717,411,303,424,000 percent. The number of people 460 years of age or older has increased by 2,361,183,241,434,822,606,848,000 percent. The number of people 465 years of age or older has increased by 4,722,366,482,869,645,213,696,000 percent. The number of people 470 years of age or older has increased by 9,444,732,965,739,290,427,392,000 percent. The number of people 475 years of age or older has increased by 18,889,465,931,478,580,854,784,000 percent. The number of people 480 years of age or older has increased by 37,778,931,862,957,161,709,568,000 percent. The number of people 485 years of age or older has increased by 75,557,863,725,914,323,419,136,000 percent. The number of people 490 years of age or older has increased by 151,115,727,451,828,646,838,272,000 percent. The number of people 495 years of age or older has increased by 302,231,454,903,657,293,676,544,000 percent. The number of people 500 years of age or older has increased by 604,462,909,807,314,587,353,088,000 percent. The number of people 505 years of age or older has increased by 1,208,925,819,614,629,174,706,176,000 percent. The number of people 510 years of age or older has increased by 2,417,851,639,229,258,349,412,352,000 percent. The number of people 515 years of age or older has increased by 4,835,703,278,458,516,698,824,704,000 percent. The number of people 520 years of age or older has increased by 9,671,406,556,917,033,397,649,408,000 percent. The number of people 525 years of age or older has increased by 19,342,813,113,834,066,795,298,816,000 percent. The number of people 530 years of age or older has increased by 38,685,626,227,668,133,590,597,632,000 percent. The number of people 535 years of age or older has increased by 77,371,252,455,336,267,181,195,264,000 percent. The number of people 540 years of age or older has increased by 154,742,504,910,672,534,362,390,528,000 percent. The number of people 545 years of age or older has increased by 309,485,009,821,345,068,724,781,056,000 percent. The number of people 550 years of age or older has increased by 618,970,019,642,690,137,449,562,112,000 percent. The number of people 555 years of age or older has increased by 1,237,940,039,285,380,274,899,124,224,000 percent. The number of people 560 years of age or older has increased by 2,475,880,078,570,760,549,798,248,448,000 percent. The number of people 565 years of age or older has increased by 4,951,760,157,141,521,099,596,496,896,000 percent. The number of people 570 years of age or older has increased by 9,903,520,314,283,042,199,193,993,792,000 percent. The number of people 575 years of age or older has increased by 19,807,040

08/14/2024



STREETS OF WEST PRYOR

FIRE ALARM - TI 30HOP

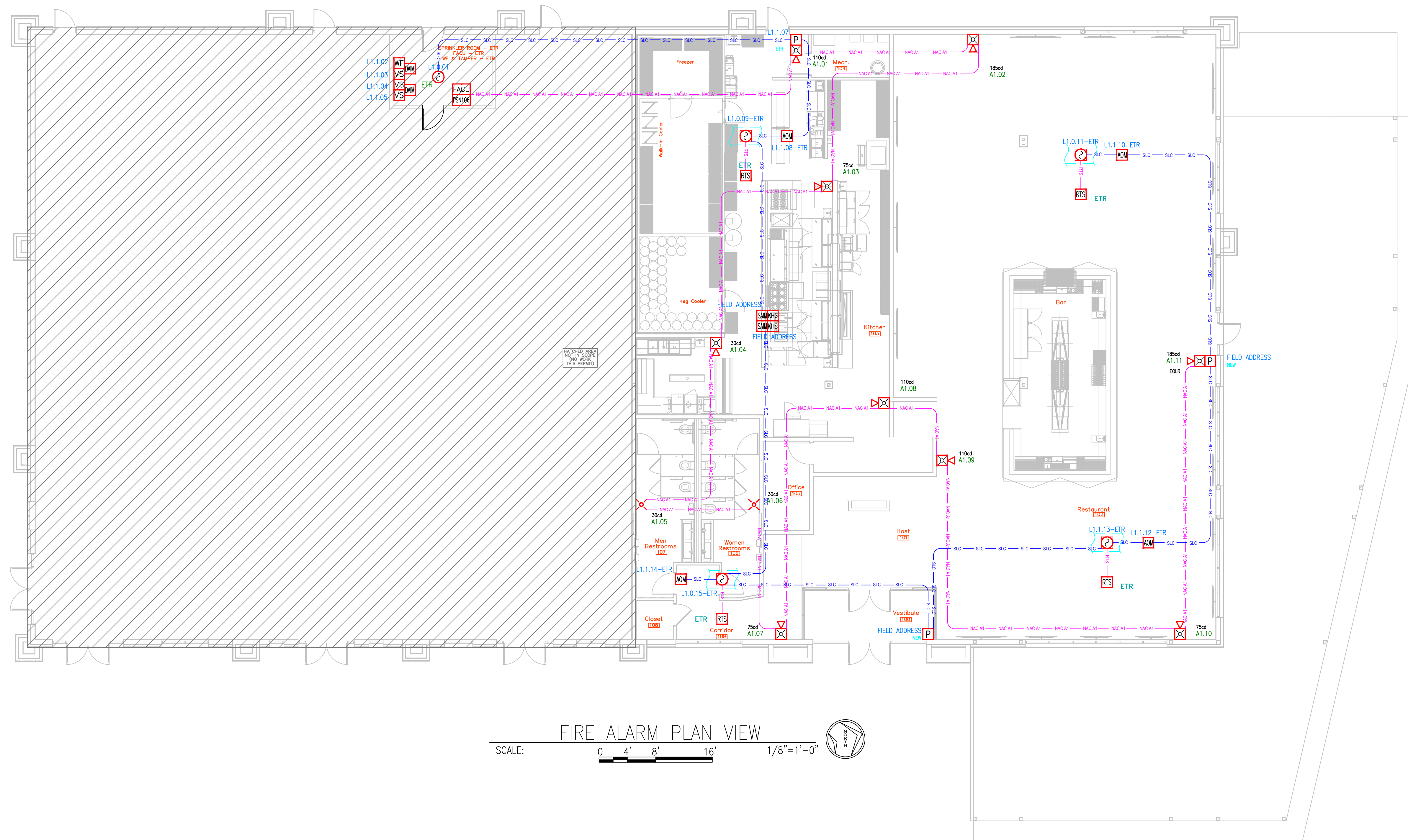
11020 NORTHWEST PRYOR ROAD

LEE'S SUMMIT, MO 64081

FLOOR PLAN

Sheet Number

FA.1.01



FIRE ALARM PLAN VIEW

SCALE: 0 4' 8' 16' 1/8" = 1'-0"



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ALLIANCE FIRE PROTECTION.
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written permission.

City of Lee's Summit
Designer NICET Level III
TROY KOEHN
Scale
1/8" = 1'-0"
Job Number
35650913
Date
07/25/2024
Description
FIRE ALARM
System Type
NOTIFIER / NFW-50XGV

Revisions

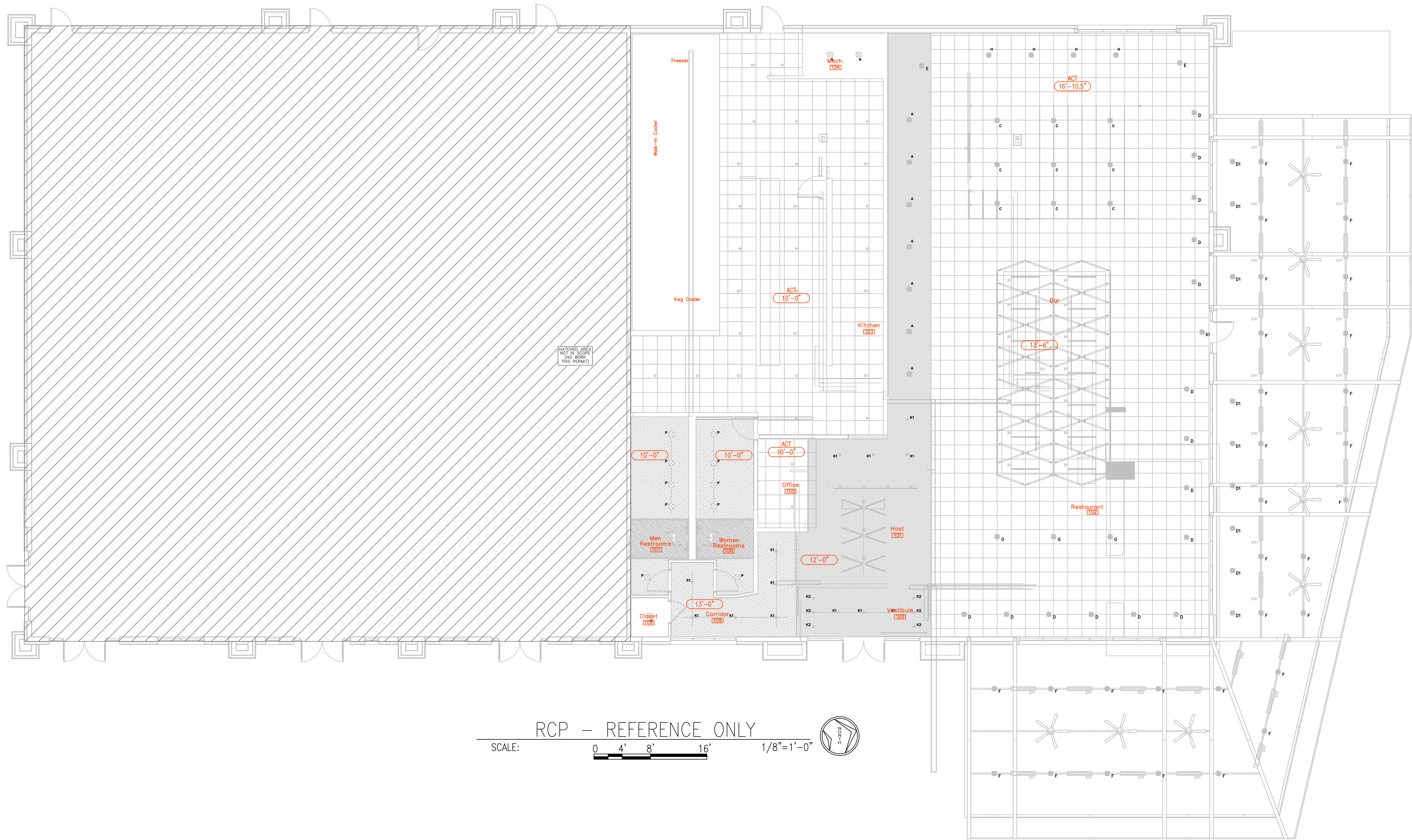
AHJ STAMP

Design Professional of Record
08/14/2024

STATE OF MISSOURI
MATTHEW
JAMES
CRUSE
NUMBER
PE-2008030093
PROFESSIONAL ENGINEER

Alliance
FIRE PROTECTION
130 W 9th Ave. Suite 101
North Kansas City, MO 64116
PH: 913-888-0647 FAX: 913-888-0618

STREETS OF WEST PRYOR
FIRE ALARM - TI 30HOP
1020 NORTHWEST PRYOR ROAD
LEE'S SUMMIT, MO 64081
RCP - REFERENCE ONLY



RCP - REFERENCE ONLY
SCALE: 0 4' 8' 16' 1/8"=1'-0"

FIRE ALARM BATTERY BACK-UP CALCULATION WORK SHEET FOR FIRE ALARM CONTROL UNIT

FACU MODEL: NFW-50X

DATE: 26-Jul-2024

ITEM	DESCRIPTION	STANDBY CURRENT PER UNIT (AMPS)		QTY		TOTAL STANDBY CURRENT PER ITEM	ALARM CURRENT PER UNIT (AMPS)		QTY		TOTAL ALARM CURRENT PER ITEM
FACU	FACU	0.1410	X	1	=	0.1410	0.2570	X	1	=	0.2570
MPS	MANUAL PULL STATION	0.0000	X	0	=	0.0000	0.0000	X	0	=	0.0000
SMOKE	PHOTO SMOKE	0.0004	X	6	=	0.0023	0.0015	X	6	=	0.0090
MCS	MULTI CRITERIA SENSOR	0.0002	X	1	=	0.0002	0.0045	X	1	=	0.0045
DIM	DUAL INPUT MODULE	0.0006	X	0	=	0.0000	0.0300	X	0	=	0.0000
AOI	RELAY MODULE	0.0008	X	2	=	0.0015	0.0064	X	2	=	0.0128
SAM	SINGLE INPUT MODULE	0.0003	X	10	=	0.0025	0.0065	X	10	=	0.0650
DD	DUCT DETECTOR	0.0004	X	2	=	0.0008	0.0050	X	2	=	0.0100
ANN	REMOTE ANNUNCIATOR	0.0002	X	10	=	0.0020	0.0045	X	10	=	0.0450
CELL	CELL COMMUNICATOR	0.2000	X	0	=	0.0000	0.0250	X	0	=	0.0000
NAC1	CKT N1 OR AUX	0.0500	X	0	=	0.0000	0.2000	X	0	=	0.0000
NAC2	CKT N2 OR AUX	0.0000	X	0	=	0.0000	0.0000	X	0	=	0.0000
		0.0000	X	1	=	0.0000	0.3760	X	1	=	0.3760
		0.0000	X	1	=	0.0000	6.2120	X	1	=	6.2120
		0.0000	X	0	=	0.0000	0.0000	X	0	=	0.0000
		0.0000	X	0	=	0.0000	0.0000	X	0	=	0.0000
TOTAL SYSTEM		STANDBY CURRENT (AMPS)		0.1502		TOTAL SYSTEM		ALARM CURRENT (AMPS)		0.9913	
										PASS	
SITE: STREETS OF WEST PRYOR, 1020 NW PRYOR ROAD, LEE'S SUMMIT, MO 64081		REQUIRED STANDBY TIME (HRS)	TOTAL SYSTEM STANDBY CURRENT (AMPS)		REQUIRED STANDBY CAPACITY (AMP-HOURS)	REQUIRED ALARM TIME (HOURS)	TOTAL SYSTEM ALARM CURRENT (AMPS)		REQUIRED ALARM CAPACITY (AMP-HOURS)		
		24	X	0.1502	=	3.6048	5 MIN=0.084 15 MIN=0.25	X	0.9913	=	0.0833
Prepared by: Troy Koehn, NICET# 111458, Level III Fire Alarm Systems. Alliance Fire Protection, LLC, 130 West 9th Ave, Suite 101, North Kansas City, MO 64116		REQUIRED STANDBY CAPACITY (AMP-HOURS)	REQUIRE D ALARM CAPACITY (AMP- HOURS)		TOTAL CAPACITY (AMP-HOURS)	TOTAL CAPACITY (AMP-HOURS)	SAFETY FACTOR		ADJUSTED BATTERY CAPACITY (AMP-HOURS)		BATTERY AMP- HOURS SUPPLIED
		3.6048	+	0.0833	=	3.6881	3.6881	X	120%	=	4.43
										7	
										BATTERY QTY: 2	

FIRE ALARM BATTERY BACK-UP CALCULATION WORK SHEET FOR REMOTE POWER SUPPLY

RPS MODEL NUMBER: PSN-106

RPS#: A

DATE: 26-Jul-2024

ITEM	DESCRIPTION	STANDBY CURRENT PER UNIT (AMPS)		QTY		TOTAL STANDBY CURRENT PER ITEM	ALARM CURRENT PER UNIT (AMPS)		QTY		TOTAL ALARM CURRENT PER ITEM
RPS	MAIN BOARD	0.0750	X	1	=	0.0750	0.0750	X	1	=	0.0750
CKT #1	CIRCUIT #A1	0.0000	X	1	=	0.0000	1.0050	X	1	=	1.0050
CKT #2	CIRCUIT #A2	0.0000	X	1	=	0.0000	0.0000	X	1	=	0.0000
CKT #3	CIRCUIT #A3	0.0000	X	1	=	0.0000	0.0000	X	1	=	0.0000
CKT #4	CIRCUIT #A4	0.0000	X	1	=	0.0000	0.0000	X	1	=	0.0000
CKT #5	CIRCUIT #A5	0.0000	X	1	=	0.0000	0.0000	X	1	=	0.0000
CKT #6	CIRCUIT #A6	0.0000	X	1	=	0.0000	0.0000	X	1	=	0.0000
CKT #7	CIRCUIT #A7	0.0000	X	1	=	0.0000	0.0000	X	1	=	0.0000
AUX	AUX POWER	0.0000	X	1	=	0.0000	0.0000	X	1	=	0.0000
TOTAL SYSTEM		STANDBY CURRENT (AMPS)		0.0750		TOTAL SYSTEM		ALARM CURRENT (AMPS)		1.0800	
										PASS	
SITE: STREETS OF WEST PRYOR, 1020 NW PRYOR ROAD, LEE'S SUMMIT, MO 64081		REQUIRED STANDBY TIME (HRS)	TOTAL SYSTEM STANDBY CURRENT (AMPS)		REQUIRED STANDBY CAPACITY (AMP HOURS)	REQUIRED ALARM TIME (HOURS)	TOTAL SYSTEM ALARM CURRENT (AMPS)		REQUIRED ALARM CAPACITY (AMP-HOURS)		
		24	X	0.0750	=	1.8000	5 MIN=0.084 15 MIN=0.25	X	1.0800	=	0.0907
Prepared by: Troy Koehn, NICET# 111458, Level III Fire Alarm Systems. Alliance Fire Protection, LLC, 130 West 9th Ave, Suite 101, North Kansas City, MO 64116		REQUIRED STANDBY CAPACITY (AMP-HOURS)	REQUIRED ALARM CAPACITY (AMP HOURS)		TOTAL CAPACITY (AMP HOURS)	TOTAL CAPACITY (AMP HOURS)	SAFETY FACTOR		ADJUSTED BATTERY CAPACITY (AMP-HOURS)		BATTERY AMP- HOURS SUPPLIED
		1.80	+	0.0907	=	1.8907	1.8907	X	120%	=	2.27
										7	
										BATTERY QTY: 2	

NAC Voltage Drop Calculator

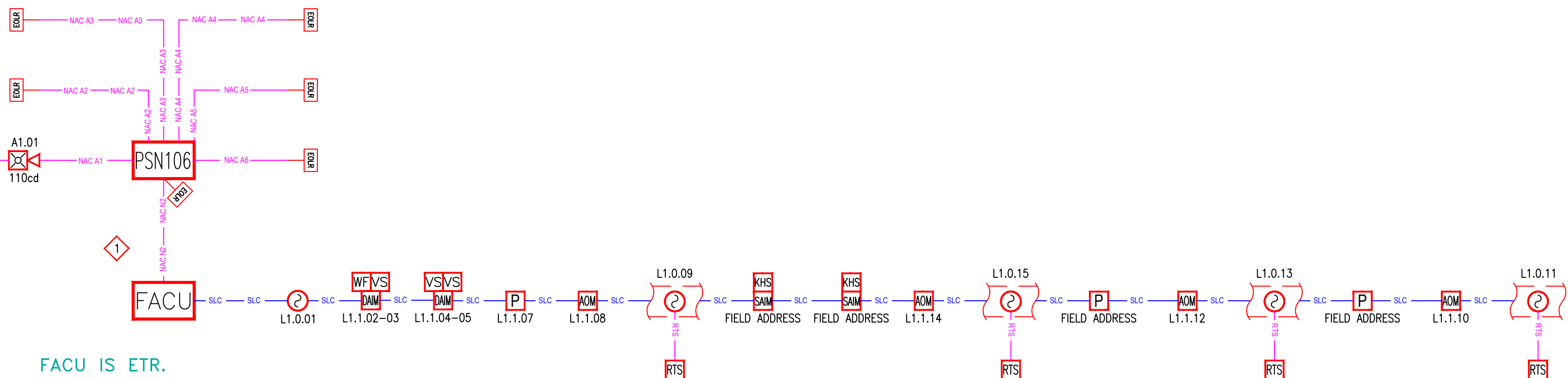
for Audio / Visual devices

Project Name		Point to Point Method		CIRCUIT MAX CURRENT	
STREETS OF WEST PRYOR		CIRCUIT IS WITHIN LIMITS		CIRCUIT IS WITHIN LIMITS	
26-Jul-2024		Totals		Voltage Drop	
A1		Current		Distance	
30HOP		1.005		401	
Nominal System Voltage		20.4		Derating:	
Minimum Device Voltage		16		End of Line Voltage	
Total Circuit Current		1.005		Percent Drop	
				9.58%	
Distance from source to 1st device		50		16	
Wire Gauge for balance of circuit		16		4.016	
Enter current in amps.		0.150 = 150 ma		Standard Wire Resistance in Ohms per 1000 feet.	
				18=6.385 16=4.016 14=2.525 12=1.588 10=0.9989	
				18-14 Awg = Solid Conductors 12-10 Awg = Stranded Conductors	
Device Number		Device Current		Voltage Drop from source	
A1.01		0.094		20.00	
A1.02		0.190		19.52	
A1.03		0.087		19.29	
A1.04		0.038		19.12	
A1.05		0.022		30.18	
A1.06		0.022		14.18	
A1.07		0.087		19.83	
A1.08		0.094		44.18	
A1.09		0.094		13.83	
A1.10		0.087		55.18	
A1.11		0.190		38.18	
END				18.45	
END				18.45	
END				18.45	
END				18.45	
END				18.45	
END				18.45	
END				18.45	
END				18.45	
END				18.45	
END				18.45	
END				18.45	
END				18.45	
END				18.45	
END				18.45	
END				18.45	
END				18.45	
Totals		1.005		401	
		End of Line Voltage		18.45	

SYSTEM RISER DIAGRAM

NOT TO SCALE.
RISER DIAGRAM IS CONCEPTUAL ONLY.
EXACT WIRING ORDER TO BE FIELD
VERIFIED, AND REFLECTED ON AS-BUILT.

PSN106 & NAC A1 ARE NEW.



FACU IS ETR.

SLC IS ETR. ONLY THE FIELD ADDRESS DEVICES ARE NEW.

This information is the property of
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It is submitted in confidence and is
not to be disclosed or used without
written permission.

City of Lee's Summit
Designer NICET Level III
TROY KOEHN
Scale:
Job Number:
35650913
Date:
07/25/2024
Description:
FIRE ALARM
System Type:
NOTIFIER / NFW-50XGV

Revisions

AHJ STAMP

Design Professional of Record
08/14/2024

STATE OF MISSOURI
JAMES COISE
NUMBER
PE-2008030089
PROFESSIONAL ENGINEER

ALLIANCE
FIRE PROTECTION
130 W 9th Ave, Suite 101
North Kansas City, MO 64116
PH: 913-888-0647 FAX: 913-888-0618

STREETS OF WEST PRYOR
FIRE ALARM - TI 30HOP
1020 NORTHWEST PRYOR ROAD
LEE'S SUMMIT, MO 64081
CALCULATIONS & RISER DIAGRAM

Sheet Number
FA.6.01