

FIRE ALARM PLAN NOTES

120VAC (BY OTHERS)

DRAWING INDEX

FA.100 COVER SHEET
FA.101 FIRE ALARM FLOOR PLAN
FA.102 RCP – FOR REFERENCE ONLY
FA.600 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: VB. OCCUPANCY: B. OCCUPANT LOAD: 50

SCOPE OF WORK:

AFP TO INSTALL A FIRE SPRINKLER MONITORING FIRE ALARM SYSTEM. AFP TO MONITOR DUCT DETECTOR INSTALLED BY OTHERS.
SYSTEM MONITORED BY A REMOTE SUPERVISING STATION PER NFPA 72 26.5 (2016)

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 UNIT	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 FACU
	REMOTE 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" WATERTIGHT 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 ZAVOC 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 FACU	TRouble AT FACU	SUPERVISORY AT FACU	WALL MOUNTED REMOTE ANNUNCIATOR	HWAC / RTU SHUTDOWN	STATUS SENT TO OFF-SITE MONITORING	ELEVATOR PHASE 1 RECALL	ELEVATOR EQUIPMENT SHUNT TRIP	
FIRE ALARM INPUTS									
1	MANUAL PULL STATION	X		X	X	X			
2	WATER FLOW	X		X	X	X			
3	SMOKE DETECTOR	X		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	X			
SUPERVISORY ALARM INPUTS									
1	DUCT DETECTOR			X		X	X		
2	TAMPER SWITCH			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		

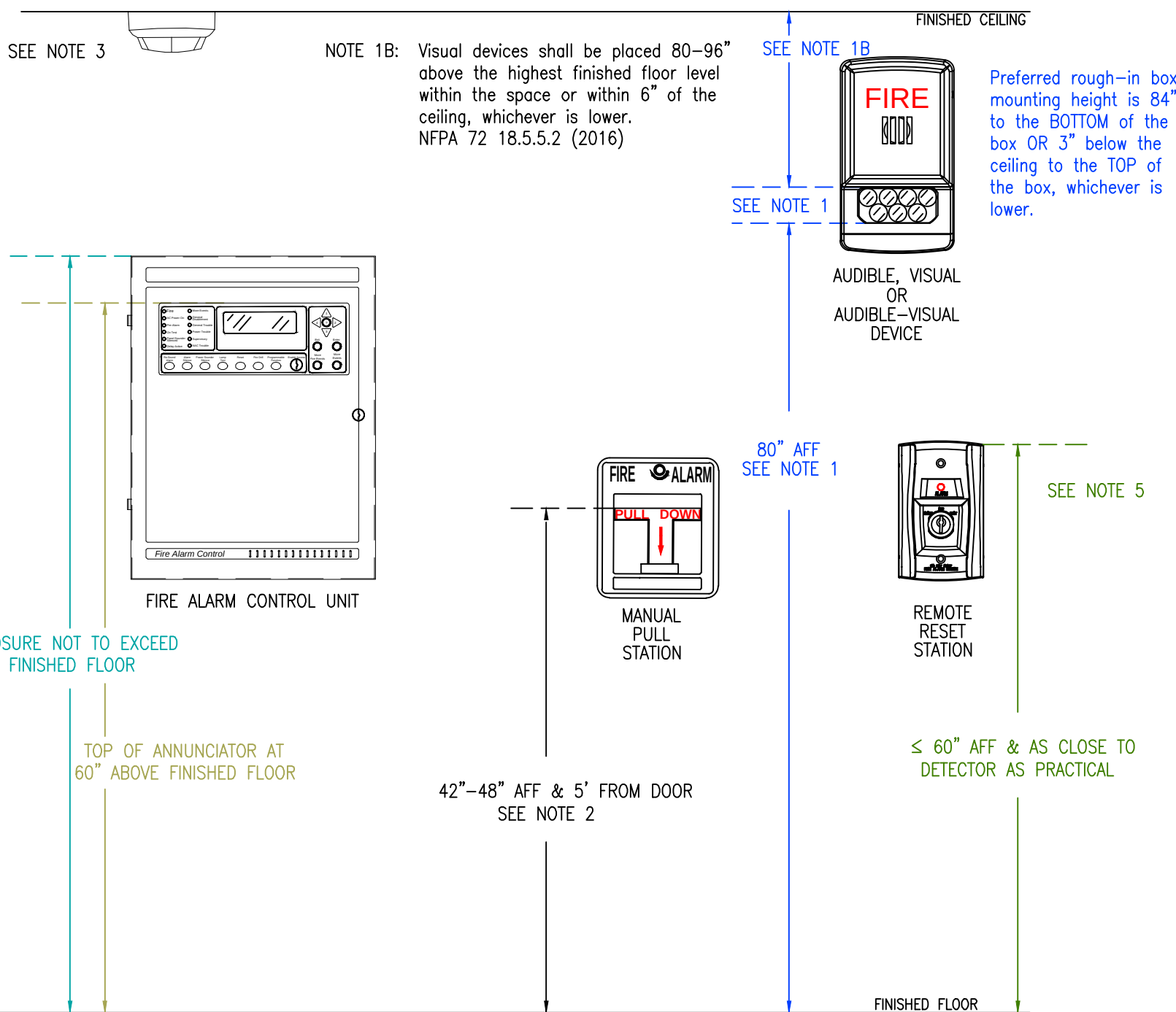
NOTE: NOT ALL CONDITIONS APPLY TO CURRENT PROJECT.

FUNCTIONAL MATRIX

ALLIANCE FIRE PROTECTION
FIRE ALARM SYSTEM

DISCOVERY PARK -
WOOF'S PLAY AND STAY

LEE'S SUMMIT, MO

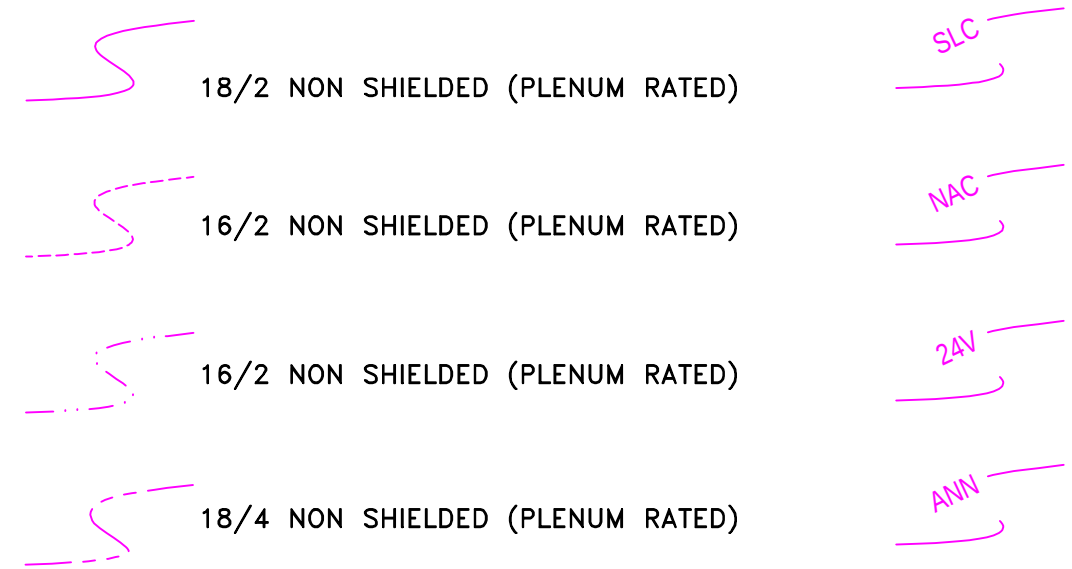


RECOMMENDED MOUNTING DETAIL
NOT TO SCALE

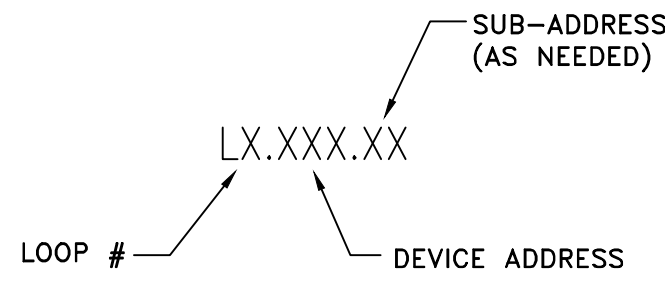
FIRE ALARM GENERAL NOTES

- 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)

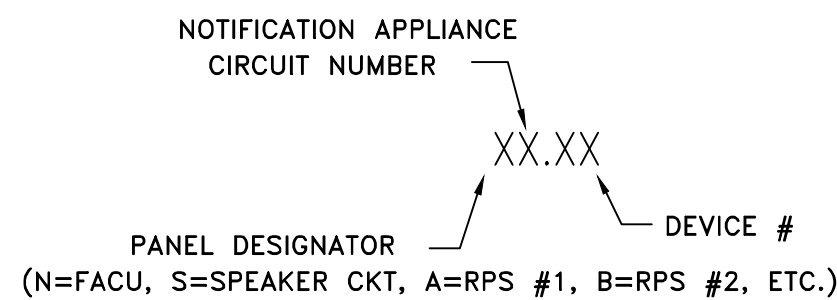
WIRING LEGEND



SIGNAL LINE CIRCUIT
DEVICE ADDRESS KEY



NOTIFICATION DEVICE ADDRESS KEY



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AHJ
LEE'S SUMMIT
Designer NICET Level III
TROY KOEHN
Scale
AS INDICATED
Job Number
42013582
Date
07/10/2025
Description
FIRE ALARM
System Type
VES / ELITE RS

Revisions

AHJ STAMP

Design Professional of Record
07/15/2025

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

WOOF'S PLAY AND STAY
FIRE ALARM
1921 NE TRAILS EDGE BOULEVARD
LEE'S SUMMIT, MO 64086
COVER PAGE

Sheet Number
FA.100

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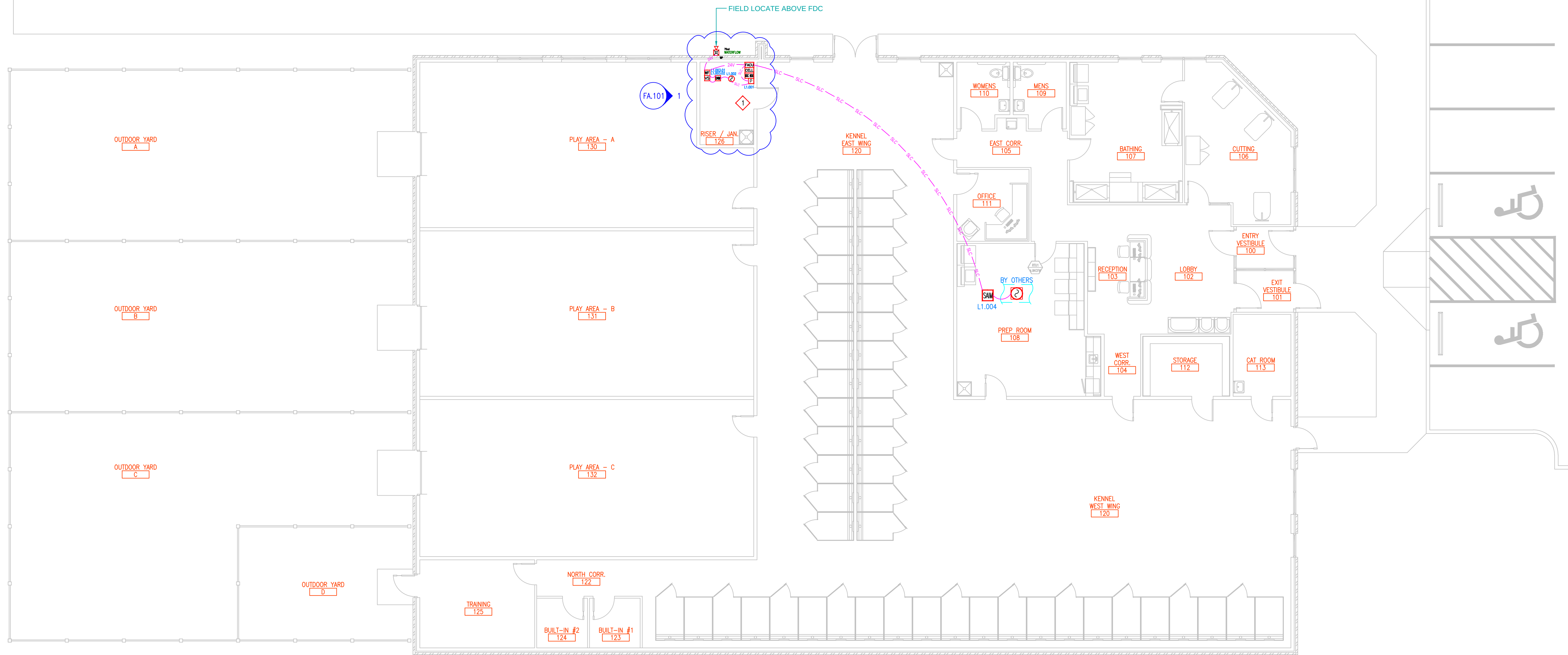
Design Professional of Record
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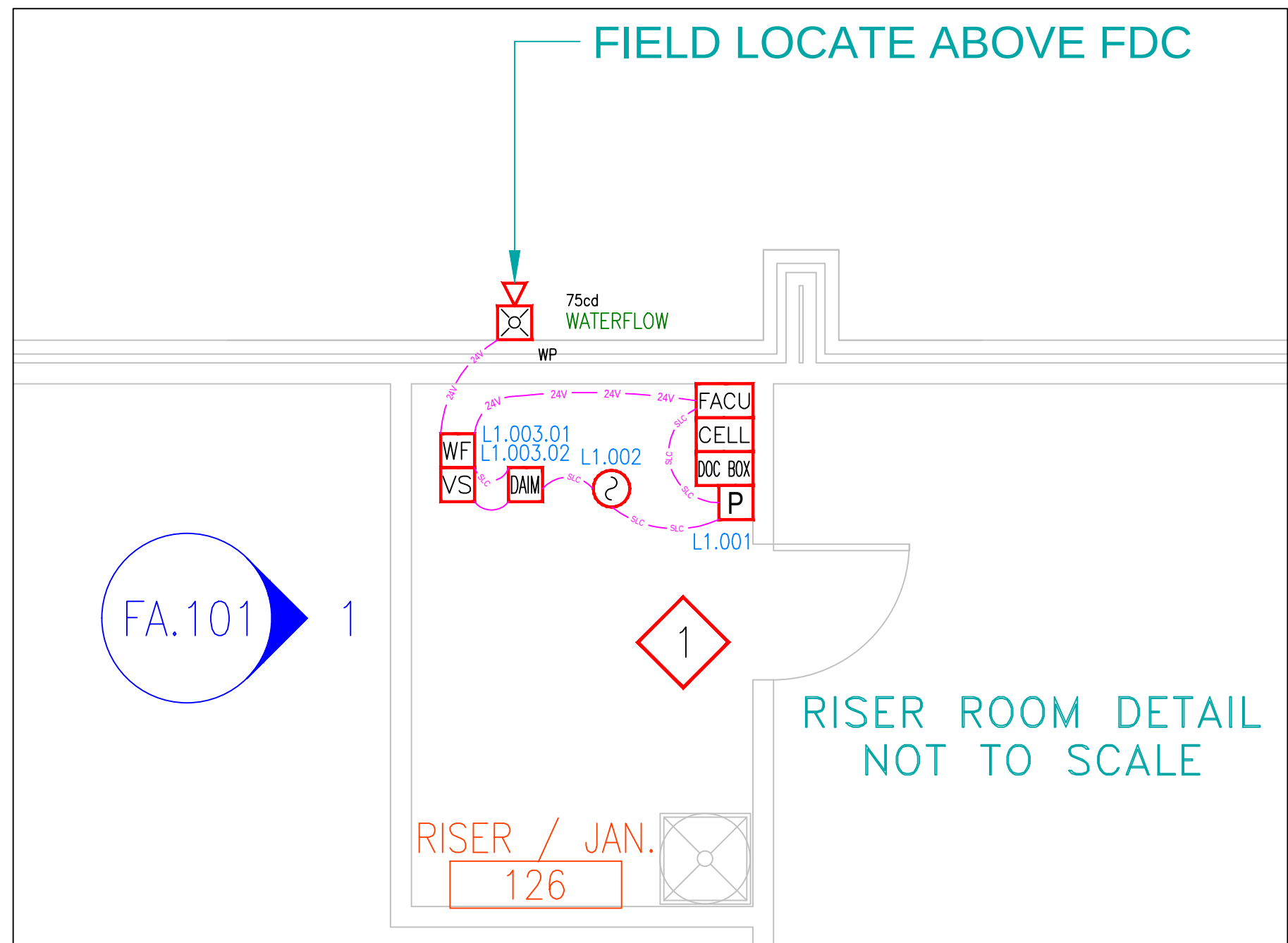
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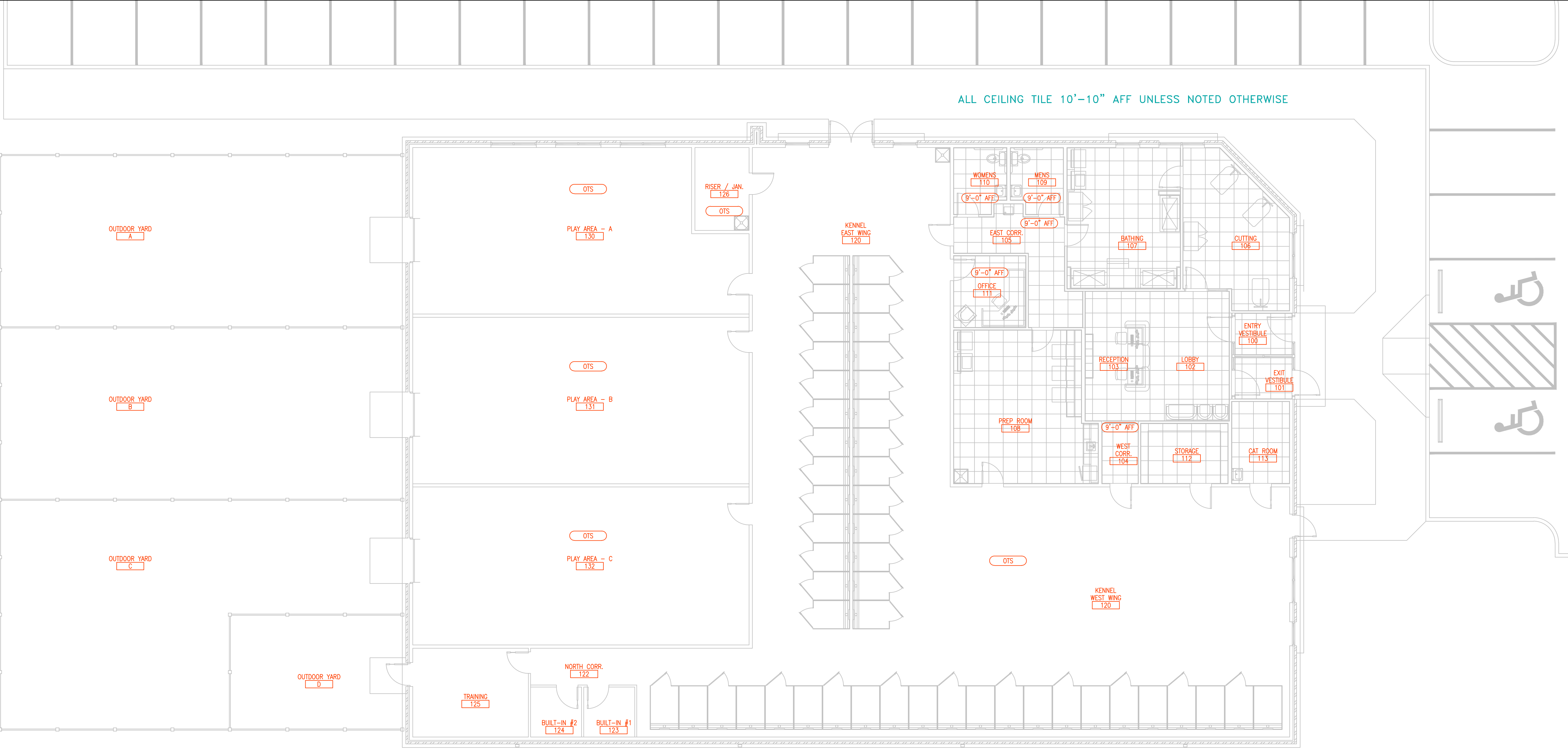
WOOF'S PLAY AND STAY
FIRE ALARM
1921 NE TRAILS EDGE BOULEVARD
LEE'S SUMMIT, MO 64086
FLOOR PLAN & DETAILS

Sheet Number
FA.101



FIRE ALARM PLAN VIEW
SCALE: 0 4' 8' 16' 1/8"=1'-0"





RCP - FOR REFERENCE ONLY

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

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WOOF'S PLAY AND STAY
FIRE ALARM
1921 NE TRAILS EDGE BOULEVARD
LEE'S SUMMIT, MO 64086
RCP - FOR REFERENCE ONLY

Sheet Number
FA.102

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

FACU MODEL: Elite-RS										DATE: 14-Jul-2025									
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 - 1 SLC Loop	0.2000	X	1	=	0.2000	0.2200	X	1	=	0.2200								
SLC	SECOND SLC OPTION	0.0700	X	0	=	0.0000	0.0700	X	0	=	0.0000								
MPS	MANUAL PULL STATION	0.0006	X	1	=	0.0006	0.0007	X	1	=	0.0007								
SMOKE	PHOTO SMOKE	0.0005	X	1	=	0.0005	0.0005	X	1	=	0.0005								
MCS	MULTI CRITERIA SENSOR	0.0006	X	0	=	0.0000	0.0300	X	0	=	0.0000								
DIM	DUAL INPUT MODULE	0.0006	X	1	=	0.0006	0.0300	X	1	=	0.0300								
DRM	DUAL RELAY MODULE	0.0004	X	0	=	0.0000	0.0004	X	0	=	0.0000								
SRM	SUPERVISED RELAY MOD	0.0002	X	0	=	0.0000	0.0060	X	0	=	0.0000								
DD	DUCT DETECTOR	0.0100	X	0	=	0.0000	0.0550	X	0	=	0.0000								
ANN	REMOTE ANNUNCIATOR	0.0300	X	0	=	0.0000	0.1100	X	0	=	0.0000								
CELL	CELL UNIT-RS	0.0420	X	1	=	0.0420	0.1100	X	1	=	0.1100								
SIM	SINGLE INPUT MODULE	0.0006	X	1	=	0.0006	0.0300	X	1	=	0.0300								
NAC1	CKT N1 OR AUX	0.0000	X	0	=	0.0000	0.0000	X	0	=	0.0000								
NAC2	CKT N2 OR AUX	0.0000	X	0	=	0.0000	0.0000	X	0	=	0.0000								
AUX	EXTERIOR HORN/STROBE	0.0000	X	1	=	0.0000	0.1050	X	1	=	0.1050								
		0.0000	X	0	=	0.0000	0.0000	X	0	=	0.0000	MAX AMP							
TOTAL SYSTEM STANDBY CURRENT (AMPS)						0.2442	TOTAL SYSTEM ALARM CURRENT (AMPS)						0.4962	5.250	PASS				
SITE: WOOF'S PLAY & STAY, 1921 NE TRAILS EDGE BLVD., LEE'S SUMMIT, MO 64086		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	0.2442	=	5.8596	5 MIN=0.084 15 MIN=0.25	0.084	X	0.4962	=	0.0417							
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.							
		5.8596	+	0.0417	=	5.9013	5.9013	X	120%	=	7.08	12							