FIRE ALARM GENERAL NOTES NOTE# NOTE TEXT

- ALL CIRCUIT POLARITY SHALL BE MAINTAINED.
- SHIELD CONTINUITY SHALL BE MAINTAINED THROUGH OUT ALL SHIELDED CIRCUITS. SHIELDS SHALL BE GROUNDED AT ONLY ONE POINT (THE EQUIPMENT HEAD END UNLESS NOTED OTHERWISE).
- ALL CIRCUITS SHALL BE FREE OF GROUNDS, WIRE TO WIRE SHORTS, AND
- NOTIFICATION APPLIANCE CIRCUITS (NAC) & INITIATING DEVICE CIRCUITS (IDC) ARE SUPERVISED. NO PARALLÈL BRANCHING (TEE-TAPPING) SHALL BE PERMITTED. NON-STYLE 6 & 7 SIGNALING LINE CIRCUITS (SLC) ALLOW PARALLEL BRANCHING (TEE-TAPPING) AT DEVICES AND RISER BOXES ONLY.
- ALL FIRE ALARM CONDUIT SHALL BE SIZED TO MEET OR EXCEED THE NEC MINIMUM REQUIREMENTS. ALL FIRE ALARM CONDUIT SIZE SHALL BE 3/4" MINIMUM UNLESS SHOWN OTHERWISE. STUB-UPS TO INDIVIDUAL DEVICES ALLOWED TO BE IN 1/2".
- INSTALLATION MATERIALS (I.E. CONDUIT, FITTINGS, HANGERS, STANDARD BOXES, ETC.) ARE NOT PROVIDED BY MIDWEST ALARM SERVICES.
- ON OPEN WIRE INSTALLATIONS CONDUIT SHALL BE PROVIDED BY OTHERS FHROUGH ALL INACCESSIBLE AREAS (I.E. ABOVE HARD CEILINGS, STUB-UPS THROUGH ENCLOSED WALLS, ECT.) AND IN ALL EXPOSED AREAS (I.E. MECHANICAL ROOMS, ELECTRICAL ROOMS, ETC.).
- MANUAL PULL BOXES SHALL BE MOUNTED 48" AFF TO THE ACTUATING HANDLE.
- WALL-MOUNTED AUDIBLE/VISUAL & VISUAL ONLY DEVICES SHALL BE MOUNTED 80" AFF TO THE BOTTOM OF THE DEVICE OR 6" FROM THE CEILING TO THE TOP OF THE DEVICE WHICHEVER IS LOWER.
- INSTALLATION SHALL BE IN STRICT CONFORMANCE WITH THE NATIONAL 10 ELECTRIC CODE, NFPA CODES, LOCAL CODES, AUTHORITIES HAVING JURISDICTION AND ALL OF THE MANUFACTURERS REQUIREMENTS.
- ALL FIRE ALARM CONTROL RELAYS SHALL BE MOUNTED WITHIN 3' OF THE DEVICES THEY CONTROL. ALL RELAY CONTROL CIRCUITS SHALL BE SUPERVISED
- ALL FIRE ALARM JUNCTION BOX COVERS SHALL BE PAINTED RED OR 12. LABELED FOR DISTINCT IDENTIFICATION. ALL FIRE ALARM PANELS & EQUIPMENT CABINETS REQUIRE A DEDICATED 13
- 120VAC CIRCUIT FOR PRIMARY POWER. FIRE ALARM AC POWER CIRCUITS SHALL BE PERMANENTLY IDENTIFIED AT THE DISTRIBUTION PANEL AND INSIDE THE FIRE EQUIPMENT CABINETS SERVED.

CODE REFERENCES

#	REFERENCED CODE	YEAR
1	International Building Code (IBC)	2018
2	International Fire Code (IFC)	2018
3	NFPA 70 National Electrical Code	2017
4	NFPA 72 National Fire Alarm Code	2016
5	NFPA 90A Standard on AC & Ventilating	2018

AUTHORITY HAVING JURISDICTION City of Lee's Summit, MO

PROJECT NARRATIVE

This project is a new apartment building complex including a clubhouse. All buildings are fully sprinklered per NFPA 13R. An addressible fire alarm system is being provided in each building with horn/strobe notification. Clubhouse

According to contract documents, the clubhouse building is occupancy group B and S-1 with areas of R-3 and A-3. None of the five AHUs are over 2,000 CFM to require detection and shutdown. Single-Station smoke and CO detectors for the R-3 area are provided by others. Apartment Units

According to contract documents, the apartment buildings are primary occupancy group R-2 with areas of A-3. Single-Station smoke and CO detectors for the R-2 area are provided by others. CO detection on bldg system is provided in the 1st floor corridor at communicating openings to the attached garages per IFC 915.1.5 exception #4. Wiring provisions for building notification in sleeping areas is provided and included in circuit calculations per code. None of the six AHUs are over 2,000 CFM to require detection and shutdown.

The Clubhouse building was submitted earlier. Sheets grayed out in the drawing index are not included this set.

> FIRE ALARM SEQUENCE OF OPERATIONS: (Input/Output Matrix)

> > SYSTEM INPUTS

SIGNALING LINE OR NOTIFICATION APPLIANCE CIRCUIT - OPEN SIGNALING LINE OR NOTIFICATION APPLIANCE CIRCUIT - SHORT SIGNALING LINE OR NOTIFICATION APPLIANCE CIRCUIT - GROUND FIRE ALARM CONTROL PANEL LOSS OF POWER FIRE ALARM CONTROL PANEL OTHER TROUBLE

SPRINKLER WATERFLOW ALARM ACTIVATION

MANUAL PULL STATION ACTIVATION SMOKE DETECTOR ACTIVATION

SMOKE DETECTOR ACTIVATION - ELEVATOR LANDING PRIMARY FLR SMOKE DETECTOR ACTIVATION - ELEVATOR LANDING OTHER FLOORS HEAT DETECTOR - ELEVATOR SHAFT OR MACHINE ROOM

DUCT SMOKE DETECTOR ACTIVATION SPRINKLER VALVE TAMPER SWITCH ACTIVATION

CARBON MONOXIDE (CO) DETECTOR (APT. GARAGES ONLY) 1. AC POWER LOSS REPORTED TO SUPERVISING STATION AFTER DELAY OF 30 MINUTES (PROGRAMMABLE).

SYSTEM OUTPUTS PRIORITY ullet u• • •

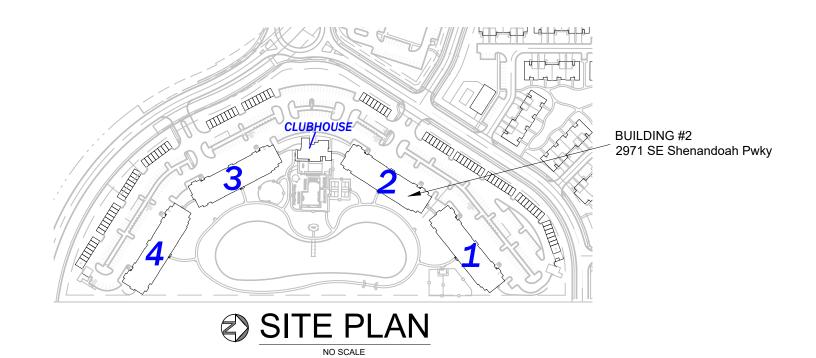
RESIDENCES AT BLACKWELL

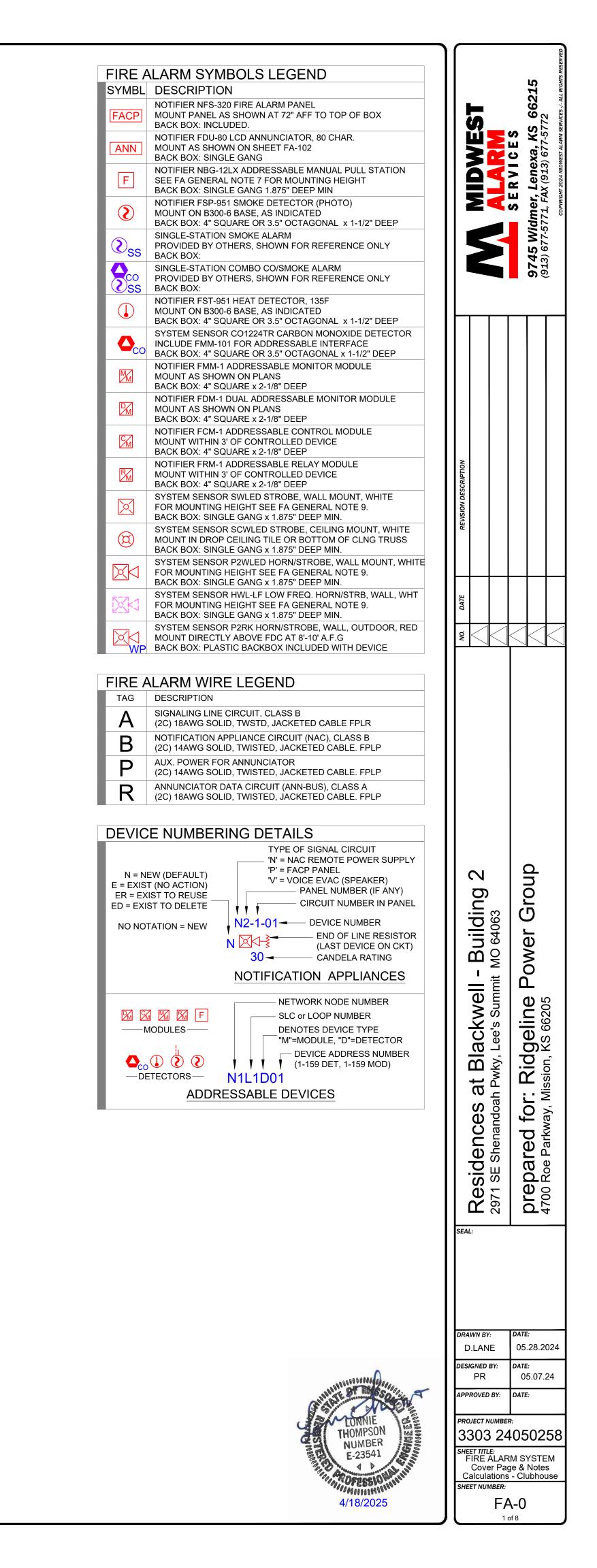
US 50 Hwy at Blackwell Lee's Summit, MO 64063 Fire Alarm System 28300

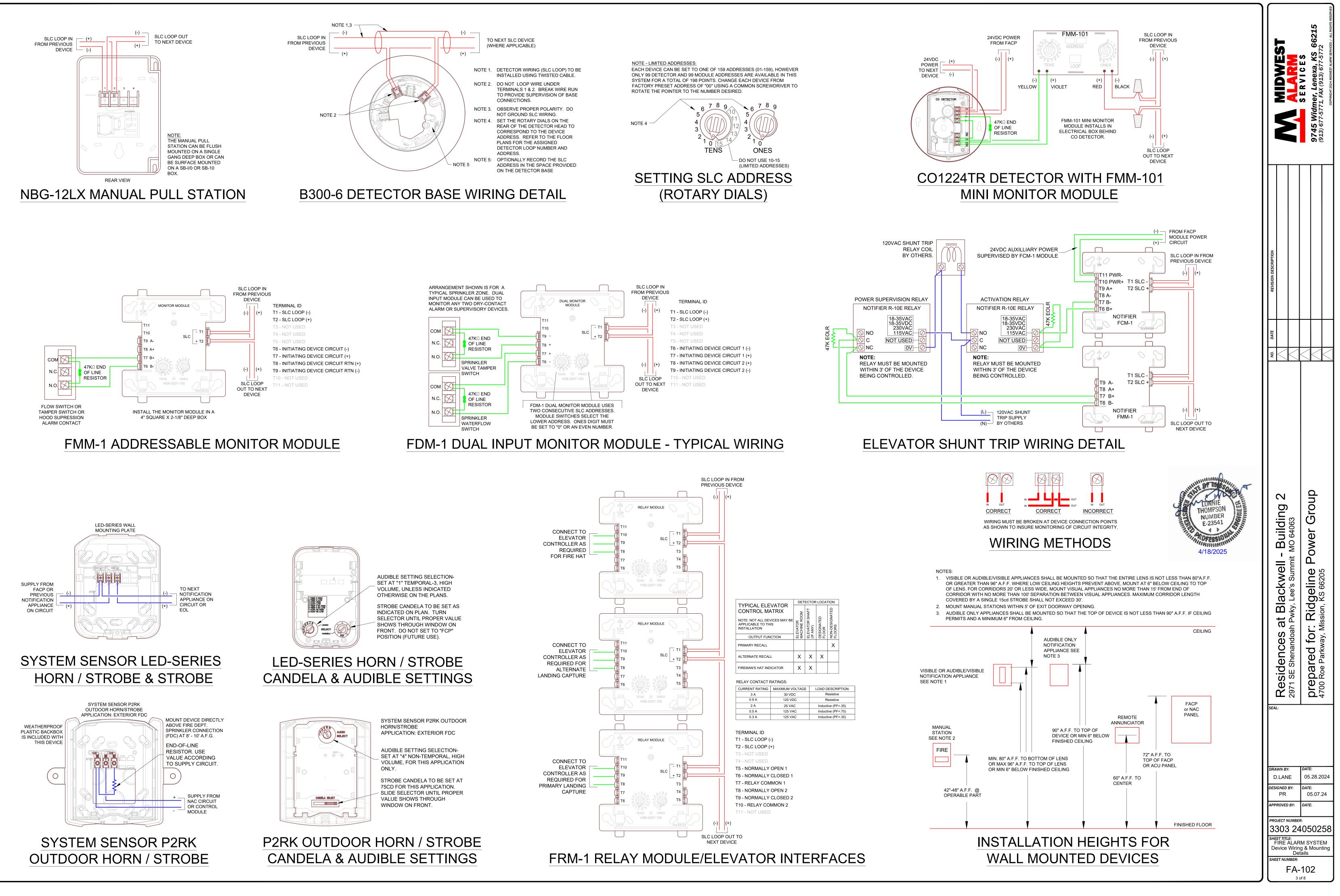
Apartment Bldg #2 - 2971 SE Shenandoah Pwky

DRAWING INDEX:

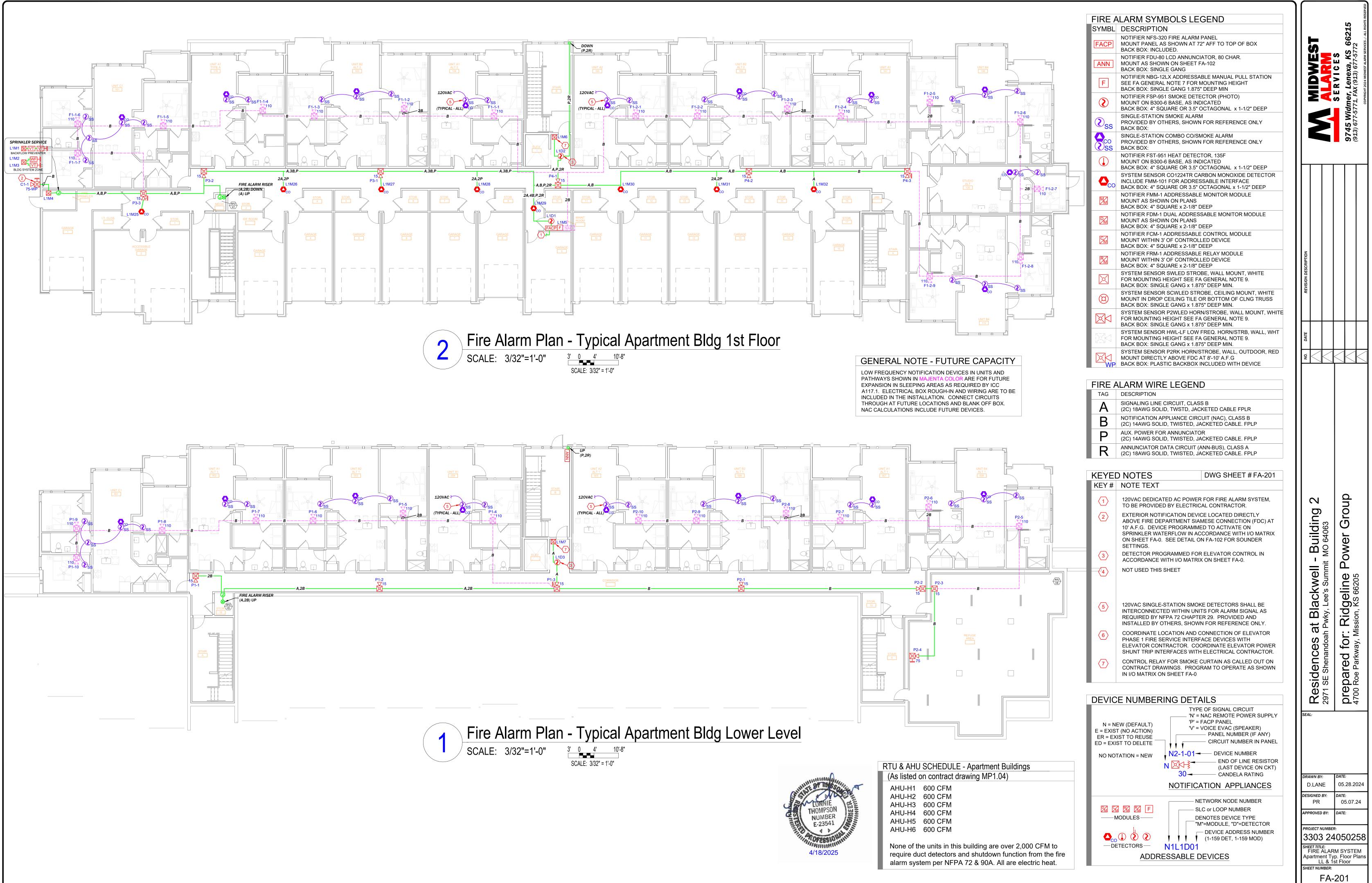
Sheet:	Title:	Revision #:	Date Issued:
FA-0	COVER SHEET, NOTES, CALCULATIONS FOR CLUBHOUSE		05.30.2024
FA-101	FIRE ALARM FLOOR PLAN - CLUBHOUSE		05.30.2024
FA-102	DEVICE MOUNTING & WIRING DETAILS		05.30.2024
FA-103	PANEL MOUNTING & WIRING, RISER DIAGRAM - CLUBHSE		05.30.2024
FA-201	FIRE ALARM FLOOR PLAN - APARTMENT LL, 1ST LEVEL		12.09.2024
FA-202	FIRE ALARM FLOOR PLAN - APARTMENT 2ND & 3RD LEVEL		12.09.2024
FA-203	FIRE ALARM FLOOR PLAN - APT. 4TH LVL, RISER		12.09.2024
FA-204	CALCULATIONS & PANEL MOUNTING - APARTMENT		01.17.2025



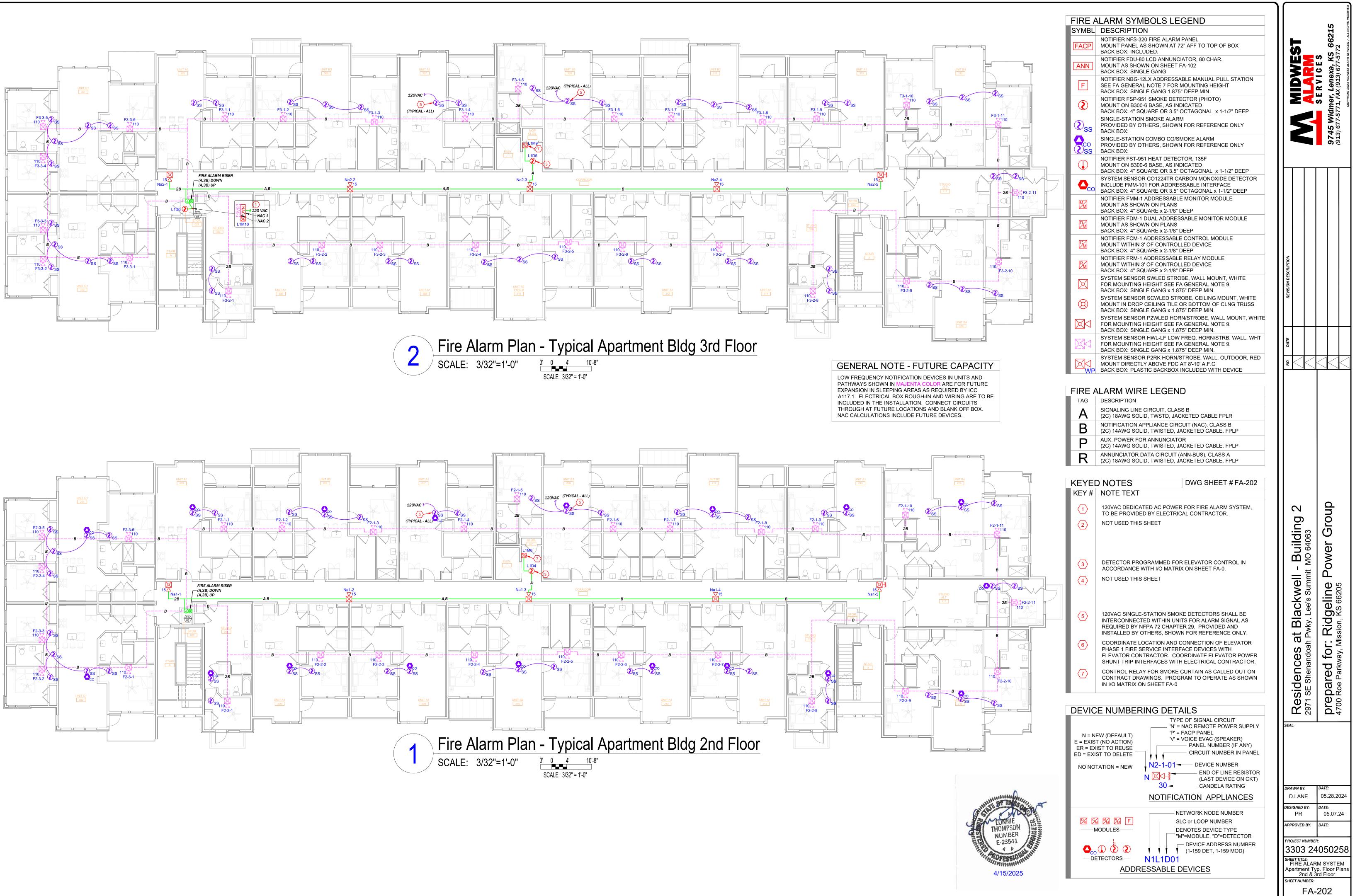


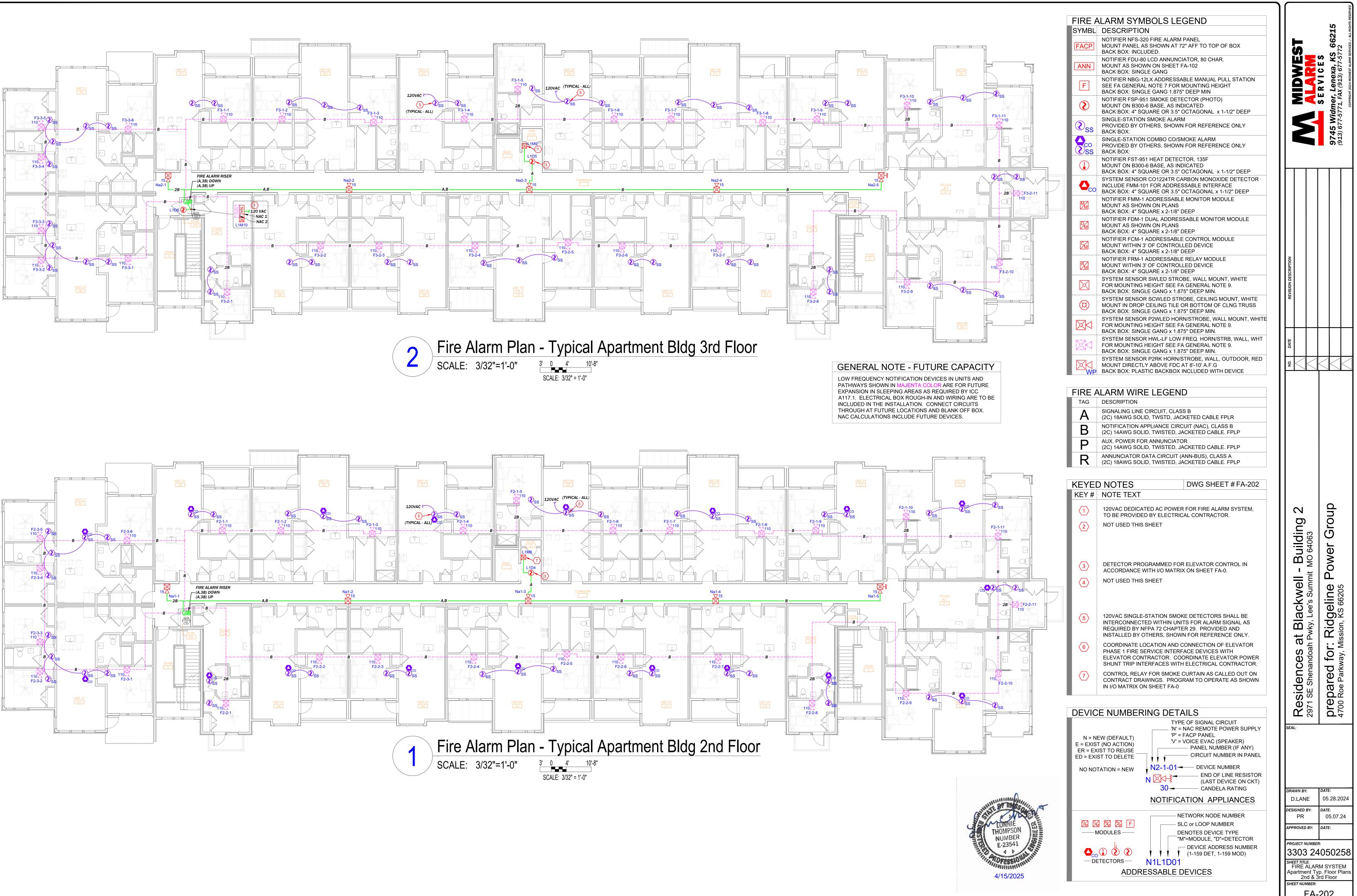


	NOTE 1.	DETECTOR WIRING (SLC LOOP) TO BE INSTALLED USING TWISTED CABLE.
	NOTE 2.	DO NOT LOOP WIRE UNDER TERMINALS 1 & 2. BREAK WIRE RUN TO PROVIDE SUPERVISION OF BASE CONNECTIONS.
	NOTE 3.	OBSERVE PROPER POLARITY. DO NOT GROUND SLC WIRING.
	NOTE 4.	SET THE ROTARY DIALS ON THE REAR OF THE DETECTOR HEAD TO CORRESPOND TO THE DEVICE ADDRESS. REFER TO THE FLOOR PLANS FOR THE ASSIGNED DETECTOR LOOP NUMBER AND ADDRESS.
─ NOTE 5	NOTE 5:	OPTIONALLY RECORD THE SLC ADDRESS IN THE SPACE PROVIDED ON THE DETECTOR BASE

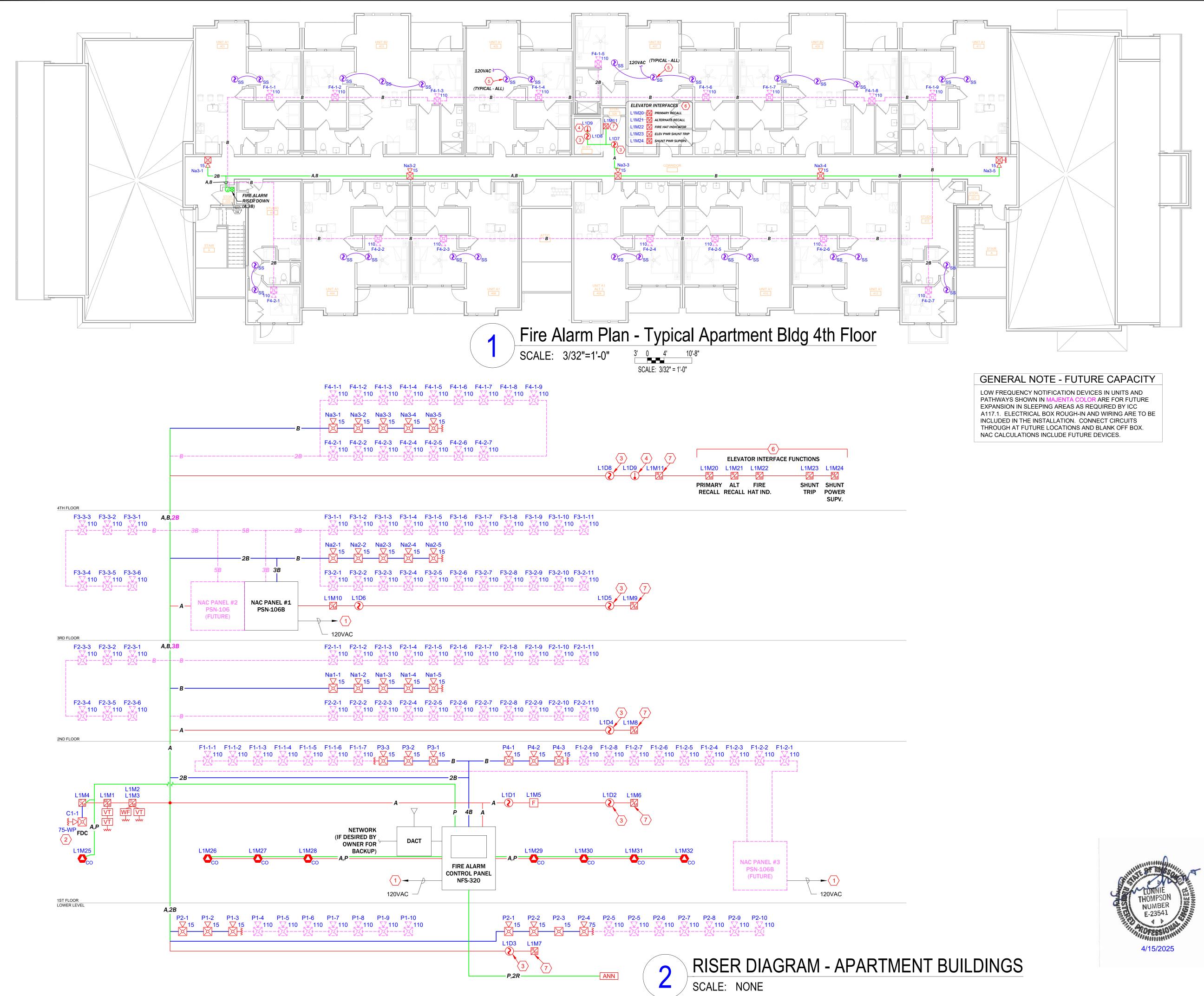


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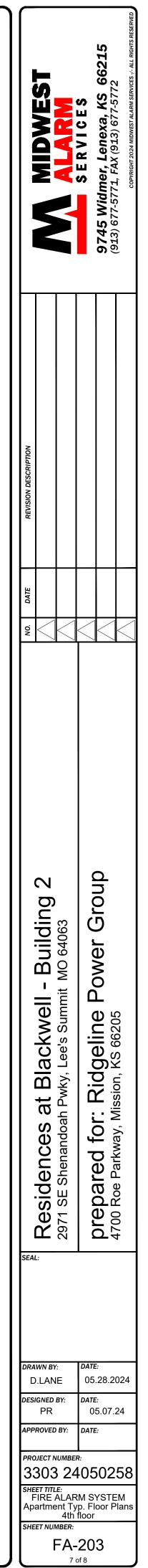




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IRE A	LARM SYMBOLS LEGEND			
FACP	NOTIFIER NFS-320 FIRE ALARM PANEL MOUNT PANEL AS SHOWN AT 72" AFF TO TOP OF BOX			
ANN	BACK BOX: INCLUDED. NOTIFIER FDU-80 LCD ANNUNCIATOR, 80 CHAR. MOUNT AS SHOWN ON SHEET FA-102			
	BACK BOX: SINGLE GANG NOTIFIER NBG-12LX ADDRESSABLE MANUAL PULL STATION			
F	SEE FA GENERAL NOTE 7 FOR MOUNTING HEIGHT BACK BOX: SINGLE GANG 1.875" DEEP MIN NOTIFIER FSP-951 SMOKE DETECTOR (PHOTO)			
()	MOUNT ON B300-6 BASE, AS INDICATED BACK BOX: 4" SQUARE OR 3.5" OCTAGONAL x 1-1/2" DEEP			
(≷ _{SS}	SINGLE-STATION SMOKE ALARM PROVIDED BY OTHERS, SHOWN FOR REFERENCE ONLY BACK BOX:			
	NOTIFIER FST-951 HEAT DETECTOR, 135F MOUNT ON B300-6 BASE, AS INDICATED			
	BACK BOX: 4" SQUARE OR 3.5" OCTAGONAL x 1-1/2" DEEP SYSTEM SENSOR CO1224TR CARBON MONOXIDE DETECTOR			
CO	INCLUDE FMM-101 FOR ADDRESSABLE INTERFACE BACK BOX: 4" SQUARE OR 3.5" OCTAGONAL x 1-1/2" DEEP NOTIFIER FMM-1 ADDRESSABLE MONITOR MODULE			
M	MOUNT AS SHOWN ON PLANS BACK BOX: 4" SQUARE x 2-1/8" DEEP			
	NOTIFIER FDM-1 DUAL ADDRESSABLE MONITOR MODULE MOUNT AS SHOWN ON PLANS BACK BOX: 4" SQUARE x 2-1/8" DEEP			
M	NOTIFIER FCM-1 ADDRESSABLE CONTROL MODULE MOUNT WITHIN 3' OF CONTROLLED DEVICE			
P	BACK BOX: 4" SQUARE x 2-1/8" DEEP NOTIFIER FRM-1 ADDRESSABLE RELAY MODULE MOUNT WITHIN 3' OF CONTROLLED DEVICE			
	BACK BOX: 4" SQUARE x 2-1/8" DEEP SYSTEM SENSOR SWLED STROBE, WALL MOUNT, WHITE			
X	FOR MOUNTING HEIGHT SEE FA GENERAL NOTE 9. BACK BOX: SINGLE GANG x 1.875" DEEP MIN.			
(\underline{X})	SYSTEM SENSOR SCWLED STROBE, CEILING MOUNT, WHITE MOUNT IN DROP CEILING TILE OR BOTTOM OF CLNG TRUSS BACK BOX: SINGLE GANG x 1.875" DEEP MIN.			
$\boxtimes \lor$	SYSTEM SENSOR P2WLED HORN/STROBE, WALL MOUNT, WHITE FOR MOUNTING HEIGHT SEE FA GENERAL NOTE 9.			
[]. [].	BACK BOX: SINGLE GANG x 1.875" DEEP MIN. SYSTEM SENSOR HWL-LF LOW FREQ. HORN/STRB, WALL, WHT FOR MOUNTING HEIGHT SEE FA GENERAL NOTE 9.			
	BACK BOX: SINGLE GANG x 1.875" DEEP MIN. SYSTEM SENSOR P2RK HORN/STROBE, WALL, OUTDOOR, RED			
	MOUNT DIRECTLY ABOVE FDC AT 8'-10' A.F.G BACK BOX: PLASTIC BACKBOX INCLUDED WITH DEVICE			
	LARM WIRE LEGEND			
TAG	DESCRIPTION SIGNALING LINE CIRCUIT, CLASS B			
A	(2C) 18AWG SOLID, TWSTD, JACKETED CABLE FPLR NOTIFICATION APPLIANCE CIRCUIT (NAC), CLASS B			
B	(2C) 14AWG SOLID, TWISTED, JACKETED CABLE. FPLP AUX. POWER FOR ANNUNCIATOR			
P R	(2C) 14AWG SOLID, TWISTED, JACKETED CABLE. FPLP ANNUNCIATOR DATA CIRCUIT (ANN-BUS), CLASS A			
	NOTES DWG SHEET # FA-203			
$\langle 1 \rangle$	120VAC DEDICATED AC POWER FOR FIRE ALARM SYSTEM, TO BE PROVIDED BY ELECTRICAL CONTRACTOR.			
2	EXTERIOR NOTIFICATION DEVICE LOCATED DIRECTLY ABOVE FIRE DEPARTMENT SIAMESE CONNECTION (FDC) AT			
	10' A.F.G. DEVICE PROGRAMMED TO ACTIVATE ON SPRINKLER WATERFLOW IN ACCORDANCE WITH I/O MATRIX			
	ON SHEET FA-0. SEE DETAIL ON FA-102 FOR SOUNDER SETTINGS.			
$\langle 3 \rangle$	DETECTOR PROGRAMMED FOR ELEVATOR CONTROL IN ACCORDANCE WITH I/O MATRIX ON SHEET FA-0.			
<u>\</u>	HEAT DETECTOR(S) TO BE LOCATED WITHIN 24" OF EACH SPRINKLER HEAD IN ELEVATOR HOISTWAY AND MACHINE ROOM. DEVICE PROGRAMMED FOR ELEVATOR POWER SHUNT TRIP IN ACCORDANCE WITH I/O MATRIX ON SHEET FA-0. SHUNT TRIP EQUIPMENT BY OTHERS.			
5	120VAC SINGLE-STATION SMOKE DETECTORS SHALL BE INTERCONNECTED WITHIN UNITS FOR ALARM SIGNAL AS			
	REQUIRED BY NFPA 72 CHAPTER 29. PROVIDED AND INSTALLED BY OTHERS, SHOWN FOR REFERENCE ONLY.			
6	COORDINATE LOCATION AND CONNECTION OF ELEVATOR PHASE 1 FIRE SERVICE INTERFACE DEVICES WITH ELEVATOR CONTRACTOR. COORDINATE ELEVATOR POWER			
7	SHUNT TRIP INTERFACES WITH ELECTRICAL CONTRACTOR.			
(7)	CONTRACT DRAWINGS. PROGRAM TO OPERATE AS SHOWN IN I/O MATRIX ON SHEET FA-0			
DEVIC	E NUMBERING DETAILS			
	TYPE OF SIGNAL CIRCUIT 'N' = NAC REMOTE POWER SUPPLY 'P' = FACE BANEL			
E = EXIS	EW (DEFAULT)'P' = FACP PANEL(NO ACTION)'V' = VOICE EVAC (SPEAKER)IST TO REUSEPANEL NUMBER (IF ANY)			
ED = EXIS				
NO NO	ATION = NEW			
	30 - CANDELA RATING			
	NETWORK NODE NUMBER			
N	IODULES DENOTES DEVICE TYPE TM"=MODULE, "D"=DETECTOR			
	OEVICE ADDRESS NUMBER OEVICE ADDRES			
	NILIDUI			
	ADDRESSABLE DEVICES			



Location: 3rd floor storage room a Qty Panel Standby (Qty Part # Description Each 1 PSN-106 NAC Power Expander 0.075 Panel Standby: NAC Circuits (See NAC Configuration below) Ckt Use Description Class 1 Notification 2nd floor corridor Class B 2 Notification 3rd floor corridor Class B 3 Notification 4th floor corridor Class B 4 Notification (FUTURE) 3rd flr units #3 Class B 5 Notification (FUTURE) 4th flr units #1 Class B 6 Notification (FUTURE) 4th flr units #2 Class B AUX Aux Power NAC Standby: NAC Standby: NAC Circuit Current: NAC Circuit Current:	Alarm Mins: 5 ervices Safety Margin: 20% NAC Source Voltage: 20.4 Max Panel Current (amps): 10 User assumes all responsibility to ensure the quantities and current draw values in this worksheet are accurate prior to submittal. 10 (amps) Alarm (amps) 10 Total Each Total 0.075 0.075 0.075 0.075 Panel Alarm (amps) 10 Standby (amps) Alarm (amps) 10 0.00000 0.17500 0.075 0.00000 0.17500 0.17500 0.00000 1.09200 0.17500 0.00000 1.63800 0.00000 0.00000 1.27400 0.00000 0.00000 NAC Alarm: 4.52900 Standby (amps) Alarm (amps) 1.27400 0.00000 0.07500 0.07500 0.07500 0.07500 0.07500 0.07500 0.07500 0.07500 0.075000 Total Alarm: 4.60400 24 Alarm Mins: 5	NOTIFICATION POWER SUMMARY - HORN/STROBE CIRCUITS FACP Ckt Oty Load Circuit Start Line Load Circuit	FIRE ALARM CONDUTS NPUT NPUT MONITOR MODULE POTTER MODULE POTTER MONITOR MODULE T2" NAC PANEL INSTALLATION ELEVATION VIEW FLOOR LEVEL PSN-106 NACC
AH Required: Total Combined St Total Combined St Project Name: Residences at Bla Lee's Summit MO		spare Nc-3 0 0.000 A 3.00 A 0.00% 0 Ft 14ga solid Cu 20.4 0.00 0.00 V 20.40 spare Nc-4 0 0.000 A 3.00 A 0.00% 0 Ft 14ga solid Cu 20.4 0.00 0.00 V 20.40 spare Nc-5 0 0.000 A 3.00 A 0.00% 0 Ft 14ga solid Cu 20.4 0.00 0.00 V 20.40 spare Nc-5 0 0.000 A 3.00 A 0.00% 0 Ft 14ga solid Cu 20.4 0.00 0.00 V 20.40 spare Nc-6 0 0.000 A 3.00 A 0.00% 0 Ft 14ga solid Cu 20.4 0.00 0.00 V 20.40 TOTALS 16 2.912 A 10.0 A 29.12% V V V V	5 <u>3</u> "
Location: 3rd floor storage room (FUTURE) Panel Standby (Qty Panel 1 PSN-106 NAC Power Expander 0.075 Panel Standby: Panel Standby: NAC Circuits (See NAC Configuration below) Ckt Use NAC Circuits (See NAC Configuration below) Ckt Use NAC Circuits #1 Class B 1 Notification (FUTURE) 2nd fir units #2 Class B 3 Notification (FUTURE) 2nd fir units #1 Class B AUX Nuce Calculation Summary Panel Current: NAC Standby:	NAC Source Voltage: 20.4 Max Panel Current (amps): 10 User assumes all responsibility to ensure the quantities and current draw values in this worksheet are accurate prior to submittal.	System Power Requirements Notifier NFS-320 Fire Alarm Control Panel Protected Premises: Residences at Blackwell - Apartment Building typical Date: 12.09.2024 Address: 2911 SE Shenandoah Pvky / US 50 Hwy at Blackwell Date: 12.09.2024 Address: 2911 SE Shenandoah Pvky / US 50 Hwy at Blackwell Date: 12.09.2024 City: Lee's Summit State: MO Zip: 64063 Prepared By: Midwest Alarm Services - David Lane Phone: (913) 677-577 Address: 9745 Widmer Email: City: City: Lenexa State: KS Zip: 66215 Clear ProjectInformation AC Branch Current Requirements 5.00 AMPS @ 120 VAC Check Current required by source to power the fire alarm system. 0.67 Amps Check Primary Standby Load 0.67 Amps Check Current load on the primary power supply during non-alarm conditions. 4.01 Amps Check Secondary Load Requirements 20.99 Amp Hours Check Total Secondary Load from the calculation table below. Current Date Check	USE THI SEPARA WITHIN O O O O O O O O O O O O O O O O O O O
Location: 1st floor mech room (FUTURE) Panel Standby (Qty Part # Description Each 1 PSN-106 NAC Power Expander 0.075 Panel Standby: NAC Circuits (See NAC Configuration below) Ckt Use Description Class 1 Notification (FUTURE) 1st flr units #1 Class B 2 Notification (FUTURE) 1st flr units #2 Class B 3 Unused Class B Class B 4 Unused Class B Class B 5 Unused Class B Class B 6 Unused Class B Class B AUX Aux Power NAC Standby:	Ackwell Standby Hours: 24 Alarm Mins: 5 Safety Margin: 20% NAC Source Voltage: 20.4 Max Panel Current (amps): 10 User assumes all responsibility to ensure the quantities and current draw values in this worksheet are accurate prior to submittal.	Current Draw Total (AH) Secondary Standby Load x Required Standby Time 17.15 Secondary Alarn Load x Required Alarn Time (hours) 0.34 4.048 A x 0.084 hours 0.34 Gendary Load x Required Alarn Time (hours) 0.34 Gendary Load Total Secondary Load 17.49 @ USA Camada Derating factor 12.99 Battery Selection 26 Amp Hours Check Select batteries from the list below. 26 Amp Hours Check Select batteries from the list below. 26 Amp Hours Check Battery Selection 26 Amp Hours Check Select batteries from the list below. 26 Amp Hours Check Battery Distribution Chart Shows amp-hour distribution of your selections. Secondary Alarn Load Secondary Standby Load Secondary Alarn Load Secondary Alarn Load Secondary Alarn Load Secondary Alarn Load Secondary Standby Load 755 Secondary Alarn Load Secondary Alarn Load	AH Image: Second arrow of the second arrow of t

